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Multi Dimensional Deprivation in India during and after the Reforms: Do the Household Expenditure and the Family Health Surveys Present Consistent Evidence[1]?

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Abstract

This paper uses the recent approach of multidimensional deprivation measures to provide a comprehensive and wide ranging assessment of changes to living standards in India during the period, 1992/93-2004/5.This covers the reforms and the immediate post reforms time periods. The study is based on the simultaneous use of two parallel data sets, namely the NSS and NFHS data sets covering proximate rounds and near identical time periods. The study is conducted both at regionally disaggregated levels and by socio economic groups. The deprivation dimensions range widely from the conventional expenditure dimensions to non expenditure dimensions such as access to drinking water and clean fuel, to health dimensions such as child stunting and the mother's BMI. The use of decomposable deprivation measures allows the identification of regions, socio economic groups and deprivation dimensions that are contributing more than others to total deprivation.

Key Words: Multidimensional Deprivation, Social Exclusion, Decomposable Deprivation Measures, Scheduled Classes and Tribes, Clean Fuel, Stunted Children.

JEL Classification: D63, H75, I 31, I 32.

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Multi Dimensional Deprivation in India during and after the Reforms: Do the Household Expenditure and the Family Health Surveys Present Consistent Evidence?

1. Introduction

The work of Sen (1985, 1992) has led to a change in our approach to welfare comparisons between households and between nations at a point in time and in evaluating a nation's welfare gains over a period of time. Backed up by greater availability of data and relevant information, Sen's influential work and his introduction of key concepts such as "functioning" and "capabilities" has led to a move away from an exclusive reliance on uni dimensional and money metric measures such as inequality and poverty rates, based solely on income and expenditure, to multidimensional measures of deprivation based on a wider array of attributes that take note of the fact that deprivation can occur in multiple dimensions. These measures combine qualitative and quantitative information in evaluating an individual's ability to lead a decent life through access to resources that are both monetary and nonmonetary in nature. As Bourguignon and Chakravarty (2003) argue, "well being is intrinsically multidimensional from the view point of 'capabilities' and 'functionings', where functionings deal with what a person can ultimately do and capabilities indicate the freedom that a person enjoys in terms of functionings" (p.276). Sen's work led to the use by the United Nations Development Program [UNDP (1990-2005)] of the Human Development Index (HDI) that combines per capita income with life expectancy and literacy in measuring a country's average achievement. The HDI was extended to the Human Poverty Index (HPI) [Bourguignon and Chakravarty (2003), Chakravarty and Majumder (2005)] that focussed on the poorer sections and sought to capture the element of deprivation faced by them. While the HDI gives equal weight to the three welfare indicators and is based on the notion of "average achievement", the HPI in keeping with the recent multidimensional deprivation measures allows greater flexibility and lets the data tell us the percentage contribution of each of the welfare indicators to overall deprivation. As Bourguignon and Chakravarty (2003) put it, "the HPI aims to measure poverty as a failure in capabilities in multiple dimensions, in contrast to the headcount measure focused on low incomes" (p. 277).The need to consider multiple dimensions, not just income or expenditure, in measuring deprivation and evaluating welfare led to several country studies that used a wide array of deprivation indicators- examples include Klasen (2000) on South Africa, Majumdar and Subramanian (2001) on India ,and

Hicks (1997) on a set of 20 developing countries. Klasen (2000) compares a composite measure of deprivation with the standard expenditure based poverty measure and provides South African evidence that shows there is very weak correlation between the two measures among the worst off households. More recently, Ayala, Jurado and Perez-Mayo (2010) have shown on regionally disaggregated Spanish data that Klasen (2000)'s finding of weak correlation at the aggregate country level holds at the regional level as well.

There have been several theoretical advances in the measurement of multidimensional deprivation. Analogous to Sen (1976)'s pioneering contribution to the axiomatic approach to poverty measurement, there have been several recent attempts at proposing multi dimensional measures of deprivation based on an axiomatic approach to measurement of social exclusion. These include Dutta, Pattanaik and Xu (2003), Chakravarty and D'Ambrosio (2006), Bossert, D'Ambrosio and Peragine (2007), Alkire and Foster (2009), and Jayaraj and Subramanian (2010)[4]. The empirical attempts are all based on decomposable measures of deprivation since the calculation of the percentage contribution by a region or a deprivation category to overall deprivation is a key motivation in these investigations. While Chakravarty and D'Ambrosio (2006), Alkire and Foster (2009), Jayaraj and Subramanian (2010) present the breakdown of the deprivation by regions, Chakravarty and Majumder (2005) provide evidence on the breakdown by deprivation category, consistent with the spirit behind the HDI and HPI. The calculations on the decomposition of overall deprivation, whether by region or by deprivation category, reflect the fact that for policy purposes and to devise effective policy interventions it is important to identify regions that are more deprived than the others and explore the reason for the deprivation by identifying the categories that contribute the most to overall deprivation. The recent approach of using multidimensional deprivation thus has the advantage over the income or expenditure based poverty measures of allowing greater flexibility and provides for more informed policy making.

Unlike most of the empirical attempts on multi dimensional deprivation that are conducted on aggregate country level data, Jayaraj and Subramanian (2010) take the household as the unit of analysis and base their study on unit record data. The present study shares this feature and presents evidence on the decomposition both between regions and between deprivation

[4] What Chakravarty and D'Ambrosio (2006) refer to as "social exclusion", Jayaraj and Subramanian (2010) call "deprivation".

categories. We therefore combine the multidimensional aspect of the deprivation measures with a multiregional approach that takes as the starting point the household as the unit of analysis. In doing so, the study maximises the policy interest by identifying both regions and deprivation categories that require effective policy interventions.

The context of this study is India during and after the recent economic reforms. The severe balance of payments crisis in the early 1990s led to a series of economic reforms in India. This study is not motivated by an attempt to examine the effects of these reforms on the living standards in India since we don't have counterfactual evidence on what would have happened if these reforms had not been undertaken. We have taken a period (1992/3 to 2005/6) that covers what has been described as " first and second generation reforms" in India and tried to assess the changes to deprivation over this period taking care not to attribute the changes directly to the reforms. Nevertheless, given the interest that the economic reforms in India have attracted both in India and internationally, the period covered makes the results of considerable interest. Notwithstanding the use of multi dimensional deprivation measures in several recent empirical investigations, much of the literature on changes to living standards in India during this recent period is based on uni dimensional, money metric measures such as poverty and inequality. Examples include Datt and Ravallion (1998), Sen and Himanshu (2004), Datt and Ravallion (2002), Mishra and Ray (2010).While attempts have been made in Meenakshi and Vishwanathan (2003), Ray and Lancaster (2005), Ray (2007), Sen (2005) to use an alternative indicator, namely, calorie intake to assess welfare changes, these studies retain the limitations of the earlier uni dimensional poverty literature on welfare measurement.

The chief motivation of this study is to overcome this limitation and examine the magnitude of social exclusion or deprivation in India and its changes during the reforms and post reforms period using composite multi dimensional indices that consider a wider range of deprivation dimensions than have been considered previously. With the calculations based on household level unit record data so that the deprivation magnitudes measure the deprivation faced by the household, the temporal and inter temporal welfare comparisons are carried out at the state level with rural and urban areas distinguished in the comparisons. As Datt and Ravallion (1998) have pointed out, such cross state comparisons in India can act as a proxy for cross country poverty and inequality comparisons without suffering the disadvantages of the latter posed by the lack of long time series data for several countries, heterogeneity in

their political and institutional set up, and the lack of a uniform starting point for all countries. India provides an ideal setup for this. The constituent states of the Indian union, which share a common culture and heritage and have similar institutions but are at varying levels of affluence and development, thus provide an ideal framework for the regional comparisons that motivated the earlier cross country studies.

The availability of unit record data over multiple years and involving two quite large scale surveys in India provides a unique opportunity to assess and compare living standards between states and between rural and urban areas during and after the recent economic reforms. Almost uniquely, India now offers two parallel large scale data sets that contain household level information in unit record form that allow calculation and comparison of the deprivation measures between the data sets. A distinctive feature of this study is that it examines the robustness of the evidence on deprivation by comparing the results from successive rounds of two large scale surveys, namely, the well established and widely used National Sample Surveys (NSS) and the more recent National Family Health Surveys (NFHS) which, quite conveniently for us, cover (near) identical years and span virtually the same overall time period. While the former contains mostly expenditure information, but also has non expenditure information such as access to basic services, for example, cooking and electricity, the latter is slanted more towards, but not restricted to, information on health such as child anthropometric indicators, child's anaemic status, and mother's BMI. While there is some overlap between the NSS and the NFHS on information in matters such as education and access to fuel and electricity, the emphasis on expenditure based deprivation in NSS and on health deprivation in the NFHS makes the comparison between the two data sets of significant interest. To our knowledge, there has been no previous attempt in India to compare the evidence on deprivation between these two large data sets. Besides allowing examination of the robustness of the evidence on deprivation, the results contain the first set of consistency checks between these two parallel large scale surveys. An alternative way of interpreting the comparisons between the NSS and the NFHS results is to view them as evidence on the sensitivity of the picture on deprivation to the nature and range of the deprivation dimensions used, keeping in mind that the NSS data sets are slanted more towards the expenditure dimensions, and the NFHS more towards the health dimensions.

To focus our minds more clearly on the objective of this study, the following are some of the questions that this study attempts to answer[5]:

1. Has the magnitude of social exclusion, both at All India and State level, changed during and after the reforms years? Is the picture consistent between the NSS and the NFHS data sets?
2. Do the more affluent states experience lower levels of deprivation? Which states are at the greatest risk of social exclusion? How do the rural and urban areas compare with respect to the magnitude of deprivation and its change over time? Is there a stable inverse relationship between prosperity and deprivation?
3. How does the deprivation or social exclusion experienced by the scheduled classes and tribes (SC/ST) compare with those faced by the others, and, if they differ, how does that differential vary with the deprivation categories? This question is extended to all the residents in a state when we ask the question: which deprivation categories are the prime contributors to deprivation in a state and does the answer vary across states? How does health deprivation compare with that based on non health indicators?
4. Can we decompose the overall deprivation faced by a household into the various deprivation categories or dimensions? Has that breakdown remained stable across states and over time during the reform years?

In attempting to answer these questions, the study calculates the contribution of a state to deprivation at All India level and that of a deprivation category to overall deprivation. The estimates presented for the successive rounds provide evidence on how these contributions have changed, if at all, over the period considered in this study. In reporting and analysing the empirical results, the emphasis has been as much on the extent of deprivation faced by India as a whole, as on comparisons between the deprivation experiences of the constituent states as, also, on the sensitivity of the deprivation magnitudes to the data set used.

The plan of the rest of this paper is as follows. Section 2 describes, quite briefly, the multi dimensional deprivation measures that we have used in this study and states their principal

[5] The terms "social exclusion" and "deprivation" are used synonymously in this paper.

properties. The data sets are described in Section 3.The results are presented and analysed in Section 4. Section 5 concludes the paper.

2. The Multi Dimensional Deprivation Measures and their Properties.

The literature now contains several excellent expositions[6] of the axiomatic approach to multi dimensional deprivation and of the measures themselves. To make this paper self contained, this section briefly describes the multi dimensional deprivation measures used in this study and discusses some of their more useful properties for the purposes of this study.

There are, principally, two alternative approaches to multidimensional deprivation measurement. Each of these involves measuring deprivation for a well defined category (e.g. access to electricity, access to clean fuel for cooking, etc.) and then aggregating these category specific deprivation magnitudes into a single number that measures the overall magnitude of deprivation faced by a country or a region. They differ with respect to the emphasis placed when disaggregating the overall deprivation and working out the percentage contribution of each of the aggregated units. The first [see, for example, Klasen (2000), Bourguignon and Chakravarty (2003), Chakravarty and Majumder (2005)] follows the spirit of the HDI, HPI in defining deprivation as a linear function of the category specific deprivation magnitudes. This approach does not consider regional disaggregation and treats the whole country as the unit of analysis. It considers the weights of the category specific components in the measure of overall deprivation as either fixed exogenously (as with HDI) or determines them from data by principal components [Klasen (2000)] or estimates them as the deprivation shares of the deprivation dimensions/categories[7] in overall deprivation and calculated as percentages using additively decomposable deprivation measures [Bourguignon and Chakravarty (2003),Chakravarty and Majumder (2005)]. In the second approach [Chakravarty and D'Ambrosio (2006), Alkire and Foster (2009), Jayaraj and Subramanian (2010)], the emphasis is on the regional disaggregation of the deprivation measure for the country or group of countries and defining it as additive in the deprivation measures of the subgroups or regions. Jayaraj and Subramanian (2010) modify the approach of Chakravarty

[6] One such exposition, that we have relied on and borrowed from, is that in Jayaraj and Subramanian (2010,pgs. 54-58).

[7] These terms are used synonymously following their simultaneous use in the literature.

and D'Ambrosio (2006) to make it more suitable for the household level data that is considered in the present study.

This study is a hybrid of both approaches since it seeks to compare deprivation categories and the regions[8] with respect to one another and calculate the percentage contribution of each category/region to the overall deprivation.

Let there be K (≥1) dimensions of deprivation. Let x_k^j $(k = 1..., K;\ j = 1, ..., J)$ denote the percentage of households in Indian State j that is deprived in dimension k. Let x_k denote the corresponding deprivation rate for dimension k in the country as a whole.

The deprivation faced by state j is given by[9]:

$$I_\alpha^j = \left(\frac{1}{K}\right) \sum_k (x_k^j)^\alpha \quad , \ \alpha \geq 1 \qquad (1)$$

A special case of the deprivation measure given by (1) is the HDI where K=3, α=1.

If we now pool all the states and consider the region/country as a whole, then the measure of deprivation is given by:

$$I_\alpha = \left(\frac{1}{K}\right) \sum_k (x_k)^\alpha \quad , \quad \alpha \geq 1 \qquad (2)$$

The ratio, x_k^j / x_k, gives the percentage contribution of deprivation by state j in dimension k to that of the country as a whole. If we deflate this ratio by the population share of state j, i.e., s^j, then the value of the population adjusted parameter, η_k^j, tells us if state j is more deprived than the rest on account of dimension k (if η_k^j>1), or not (if η_k^j<1). The ratio of I_α^j / I_α scaled by the population share of state j tells us the deprivation in state j vis a vis the rest of the region/country after aggregating over all the dimensions of deprivation.

[8] These are the individual states in India.

[9] This is the decomposable poverty measure suggested by Foster, Greer and Thorbecke (1984).

The 7 key properties that are satisfied by I_α are:

1. If there is no deprivation in any dimension, then the overall measure I_α^j must be 0.
2. I_α^j lies between the minimal and maximal values of $(x_k^j)^\alpha$ across the K dimensions of deprivation.
3. Ceteris paribus, an increase in the deprivation in a single dimension must increase the overall measure of deprivation.
4. An eqi-proportionate increase in the deprivation in all dimensions will increase the overall measure by the same proportion.
5. Ceteris paribus, the increase in overall deprivation due to a given increase in a single dimension is larger the higher the deprivation in that dimension. This property is satisfied if $\alpha > 1$.
6. This index is additively decomposable both between states and between dimensions.
7. Given the unchanged population size for the country as a whole, migration of residents from a less deprived state to a more deprived state will increase the deprivation of the country as a whole.

Let us now briefly explain the second approach adopted in this study.

In independent contributions, Chakravarty and D'Ambrosio (2006), Jayaraj and Subramanian (2010) propose a set of measures of multidimensional deprivation that are formally equivalent. Instead of starting from the dimension specific head count deprivation rates, this approach takes a slightly different route by starting from the proportion of households who are deprived in 1,2,3, etc. dimensions, and then aggregating these into regional deprivation rates and from that to that of the nation as a whole. A key point of departure from the previous approach is that, unlike before, the precise identity of the deprivation dimension does not matter here, only the number of deprivation dimension failures matters. Following the notation used by Jayaraj and Subramanian (2010), let n_j denote the number of households that are deprived in exactly j dimensions, $j \in \{0,1,\dots,K\}$. Let the total number of households be denoted by n. Then, three possible headcount rates of deprivation are as follows.

$$H^I = \frac{n_K}{n} \quad (3)$$

$$H^U = \frac{(n_1 + n_2 + \cdots \ldots\ldots + n_K)}{n} = \sum_{j=1}^{K} H_j \text{ , where } H_j = \frac{n_j}{n}, j \in \{1, \ldots, K\} \quad (4)$$

$$H_{j^*} = \frac{(n_{j^*} + \cdots \ldots + n_K)}{n} = \sum_{j=j^*}^{K} H_j \quad (5)$$

H^I, H^U and H_{j^*} are headcount rates of multi dimensional deprivation. While H^I denotes the headcount deprivation rates of households who are derived in all the K dimensions, and is referred to as the "intersection method', H^Udenotes the corresponding headcount rates of households that are deprived in at least 1 dimension and is referred as the "union method". It is clear that while H^Iunderstates the magnitude of deprivation, H^Uoverstates it. Alternatively, H^Imeasures the magnitude of extreme deprivation, while H^U measures the aggregate of mild, moderate and extreme deprivation. A compromise is H_{j^*}, which lies between H^I and H^U , where $j^*$is specified a priori. It approaches the former when j^* moves towards K, and approaches the latter when j^* moves towards 1.

A more sophisticated measure than H_{j^*}, on the lines of Atkinson (1970)'s inequality measure and Foster, Greer and Thorbecke (1984)'s poverty measure, has been suggested by Jayaraj and Subramanian (2010) and is as follows:

$$\pi_\alpha = \sum_{j=1}^{K} (j/K)^\alpha \; H_j \quad (6)$$

The parameter,α, performs a role analogous to that of the α in case of the Atkinson (1970) and Foster, Greer and Thorbecke (1984) measures. As α increases from 1 to higher values, π_α, gives greater weight to the deprivation rates of households that are deprived in more and more dimensions, i.e., the more deprived households and , at very high α values , it measures the magnitude of extreme deprivation. This is similar to the interpretation of α as an "inequality aversion" parameter in the Atkinson (1970) inequality measure.

If we introduce superscript h to denote state 'h', so that π_α^h is the deprivation measure of state 'h', then

$$\pi_\alpha^h = \sum_{j=1}^{H} (J/K)^\alpha \; H^h{}_j \qquad (7)$$

The ratio, $\delta^h = \frac{\pi_\alpha^h}{\pi_\alpha}$ measures the percentage contribution of the state h to overall deprivation of the region i or country as a whole. If we deflate the δ^h by the population share, s^h, of state 'h', i.e. define $\eta^h = \delta^h / s^h$, then $\eta^h > 1$ suggests that state 'h' is more deprived than the region/country as whole, and less deprived if $\eta^h < 1$. Note that, in the context of this study, 'h' can also refer to members of the scheduled classes/ tribes (SC/ST), so that η^h will be used as a convenient measure to assess if the SC/ST households are more deprived or less deprived than the others.

Similar to the axiomatic properties described for the deprivation measure, I_α, given by eq. (1), the following principal properties are satisfied by π_α, given by eq. (6).

1. Anonymity: The identity of the individuals should not affect the deprivation measure.
2. Ceteris paribus, if the range of deprivation, i.e., the number of deprivation dimensions increases, then the measure will register an increase.
3. Ceteris paribus, if a household 'i' suffers deprivation in one more dimension but household 'j' experiences deprivation in 1 less dimension, and household 'i' is deprived in more dimensions than household 'j', then the measure will register an increase in deprivation. This property will hold if $\alpha > 1$ and is analogous to the Pigou-Dalton transfer principle in the context of income transfer.
4. The deprivation measure is additively decomposable in the population subgroups, i.e., can be written as a population share weighted average of the subgroup deprivation measures. This property is satisfied if $\alpha \geq 0$, and is particularly convenient in the context of the present study.

3. Data Sets.

This study is based on two of the largest data sets available anywhere, namely, the National Sample Survey (NSS) and the National Family Health Survey (NFHS) in India. The NSS data set, which has a longer history of collection and usage, combines detailed quantitative information at the household level on expenditure on various items with qualitative information on the socio economic class of the household, the household's access to basic utilities such as clean fuel for cooking, electricity, etc. This study is based on the unit records from the Consumer Expenditure Surveys (CES) carried out in the 50th (July, 1993-June, 1994), 55th (July, 1999-June, 2000), 61st rounds (July, 2004-June, 2005) of the NSS. Apart from the fact that this covers the period of economic reforms in India, the information is available at household and at state level allowing a decomposition of the all India deprivation between states, and between the SC/ST and the other socio economic groups. This study considers the following 5 deprivation dimensions in the NSS: energy for clean fuel, electricity for lighting, education of head of household head, food expenditure and clothing expenditure. While the first two use qualitative information on whether the household has access or not to that utility, we defined a household to be deprived on the last three dimensions if (a) the household head has not obtained primary education, (b) if the household's spending on food, clothing is less than half the corresponding median value[10] spending in that state sample.

The second data set used here is the National Family Health Surveys (NFHS).The NFHS[11] is a large scale, multi-round survey conducted in a representative sample of households throughout India. So far, three rounds of NFHS, namely, NFHS1-3 have been completed and this study is based on all three of them. The NFHS-1, which was conducted in 1992-93, collected extensive information on population, health, and nutrition, with an emphasis on women and young children. NFHS-2 was conducted in 1998-99 in all 26 states of India with added features on the quality of health and family planning services, reproductive health, anaemia, the nutrition of women, and status of women. NFHS-3 was carried out in 2005-06 with added information on the Body Mass Index (BMI) status of the mother of the children. Information on the following deprivation dimensions are available in all the NFHS rounds:

[10] This reflects a relative view of deprivation that can be traced to the early work of Runciman (1966)-see, also, Buhmann, et. al. (1988) and Klasen (2000) for a relativist approach in welfare comparisons across or within nations.

[11] See the NFHS webite, www.nfhsindia.org for further details.

Access to drinking water, electricity, clean fuel for cooking, 'pucca' house, toilet facility, bicycle, radio, education of the household head, whether the household belongs to the poorest wealth quintile, and the child's long and short term health status (i.e. stunted or not, wasted or not). NFHS-2 contains additional information on the mother's BMI status, while NFHS-3 contains information on the child's anaemic status. Consistent with our earlier treatment in the NSS, a household is considered educationally deprived if the household head did not receive primary education. Unlike the NSS, the NFHS has the additional complication in that while the information on the non health deprivation dimensions is at the household level, the health information is available at the individual level. To translate the individual level information to the household level, we adopted the following definition of household level health deprivation. A household was considered deprived on account of the long and short run health of its children if 60 % or more of its children (0-3 years) are "stunted" and "wasted'[12], respectively. Exploiting the information in NFHS-3, this was extended to the child's anaemic status, and a household was considered deprived if 60 % or more of its children in age group of 0-3 years suffered from severe anaemia. If the mother's BMI was outside the range 18.5 and 30, the household was considered deprived on account of the mother's health.

Several common features of these two data sets proved convenient for this study. First, the NSS rounds 50, 55 and 61 were conducted in years that were very close to those of NFHS1-3, respectively, and the period covered includes the reforms and immediate post reform years. Second, both the data sets allowed calculation of the state level averages of the deprivation magnitudes. To ensure comparability between the three rounds and between the two data sets, we settled on 15 major states disregarding the smaller states. Third, both data sets contain separate information on SC/ST and non SC/ST households. This allowed an examination of the robustness of the evidence on the welfare comparison between these socioeconomic groups. Finally, while both the data sets contain information on household's access to fuel, lighting and primary education, the NSS is slanted more towards expenditure information and the NFHS more towards that on the child's and mother's health. The evidence on the sensitivity of the picture between NSS and NFHS, especially, on the comparison between the deprivation magnitudes from these two sources of information can be interpreted as the effect

[12] A child (0-3 years) is considered "stunted" or "wasted" if that child's z score of height for age and of weight for height is less than 2, respectively. This is consistent with the definition of child malnourishment adopted in the literature [see, for example, Svedberg (1990), Glewwe, Koch and Nguyen (2004)].

of bringing in the health variables in the deprivation based welfare comparisons. This is an important aspect of this contribution since much of the NSS based literature on poverty changes in India during our chosen period, besides being based on uni dimensional measures, has ignored the movement in the health indicators since such information is not available in the NSS. In particular, there is hardly any evidence on the health status of the SC/ST households. This study addresses this limitation by providing such evidence along with that on how relatively deprived such households are in comparison with the other households.

4. Results.

The dimension specific head count rates of deprivation using equations (1), (2) (with $\alpha = 1$) in the three NSS rounds, 50,55 and 61 are presented for rural and urban areas in Tables 1 and 2, respectively. The corresponding deprivation rates for NFHS1-3 are presented in Tables 3-5 for rural areas, and Tables 6-8 for urban areas, respectively. These tables report the deprivation rates by states and by the SC/ST status of the household. The overall picture is one of declining head count rates over the chosen period across all states, in both rural and urban areas, for both household groups, and in case of both data sets. The rural areas record higher head count rates than the urban in case of both data sets, with the NSS based evidence suggesting that energy for clean fuel and education of the household head lead the expenditure dimensions in the deprivation rates. The NFHS based results also show wide variation between dimensions on the head count rates with access to drinking water, clean fuel, "pucca house" and toilet facility among those with the highest rates of deprivation. Stunted children lead on deprivation magnitude among the health variables. Though there has been an all round decline in the deprivation rates, the progress has been quite uneven between the dimensions, and between the states, with stunting of very young children (0-3 years) being one where the progress has been the least. While such declines in deprivation magnitudes are not surprising in the context of overall progress during the 1990s and the early part of the new millennium, the NSS 61st round and NFHS-3 evidence suggest that there is still considerable deprivation in case of some dimensions even at the end of our chosen period. Another result that holds generally is the higher rate of deprivation faced by the SC/ST households though, more in case of some dimensions, less for others. It is significant that SC/ST households record larger health deprivation than the others, with the gap being particularly large in case of stunting, less on account of wasting or the mother's BMI.

Place Table 1, Table 2, Table 3, Table 4, Table 5, Table 6, Table 7, and Table 8 here

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The percentage contribution of the deprivation dimensions to the overall deprivation is presented in Tables 9 for NSS (round 61, rural, urban) and in Table 10,11 for NFHS-3 (rural, urban),To focus our attention, we have reported these percentages only for the last round in each data set. The figures for the earlier rounds, which are available on request, show that the breakdown of deprivation by source or by deprivation dimensions hasn't changed much over our chosen period. The NSS evidence confirms that nearly 80 % of the deprivation is on account of the non expenditure variables, with energy for clean fuel leading the way, and this is true of both rural and urban areas. The All India estimates hide large variation between states in the deprivation rates, especially on the contribution of access to clean fuel to total deprivation. The NFHS evidence shows that, because of the inclusion of the health variables and miscellaneous non health deprivation indicators, the percentage contributions are more evenly spread out with access to clean fuel leading the way once again. The NFHS-3 results show that nearly 15 % of the overall deprivation is on account of the health status of the children and mother, with stunted children and undernourished mothers being the more significant sources of health deprivation.-

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Place Table 9, Table 10 and Table 11 here

The estimates of multidimensional deprivation, both state wise and for All India calculated using the measure given by equation (6) at various values of α, are presented in Tables 12,13 for NSS rural, urban respectively, and in Tables 14,15 for NFHS rural, urban respectively. These tables also report, in parenthesis, the percentage contribution of a state to all India deprivation exploiting the decomposable property of the multidimensional deprivation measure that is used here. The state wise figures do not differ from one another all that much at low values of α, but they do vary widely as we consider higher values of α, i.e., the more deprived households. The state wise rankings implied by the values of π are in line with expectations, for example, the poorer states of Bihar and Uttar Pradesh record much higher levels of deprivation at high α values than the richer states of Gujarat and Punjab. This is true of both data sets, and for all the three rounds considered for each survey. Consistent with the results on the dimension specific head count rates presented earlier, these tables provide

robust evidence that there has been a general decline in deprivation in India during the reforms and the post reforms period. Note, however, from the all India figures that the urban areas did not experience much of a decline in deprivation during the post reforms period. In fact, both the NSS and the NFHS provide robust evidence that there has been either no change or a small increase in urban deprivation during the second half of our sample period. This is consistent with our earlier finding [Mishra and Ray (2010)], based on uni dimensional expenditure measures using the NSS, that the welfare gain in the urban areas has been much more marginal during the post reform years, and that once the sharp increase in urban inequality is taken into consideration there has been a net decline in urban welfare during the latter period. The generally higher deprivation magnitudes reported by the NFHS over the NSS is due to a combination of the inclusion of the health indicators and the use of a wider range of non health indicators in case of the NFHS data set. Consistent with our earlier discussion, these tables confirm that the SC/ST households suffer higher deprivation than the non SC/ST households[13]. Note however that the difference between the deprivation magnitudes of these two socio economic groups increases with α and comes into prominence at high values of α, i.e., when one considers extreme deprivation or, alternatively stated, the most deprived households. Note also that this divide between the SC/ST and non SC/ST households is much sharper in the urban areas than in the rural, especially if we limit the comparisons to the non health dimensions of the NSS.

Place Table 12, Table 13, Table 14 and Table 15 here

The results contained in Tables 12-15 are summarised in the graphs presented in Figures 1-3. These graphs, namely, the D-curves introduced by Jayaraj and Subramanian (2010), plot the cumulative head count ratio (i.e. the cumulative π_α value, with $\alpha = 0$) against the fraction of deprivation dimensions, i.e., they plot the proportion of households (on y axis) who suffer deprivations in less than or equal to the proportion of deprivation dimensions shown on the x axis. The intercept on the y axis shows the proportion of households who do not suffer deprivation in any dimension. Fig. 1 shows the D curve for the 3 rounds of the NSS, Fig. 2 that for the NFHS and Fig. 3 compares the D curves for NSS, 61st round and NFHS-3. It is clear from the upward shift in the y – intercept of the D curves in Figs. 1 and 2 that both the

[13] See Meenakshi and Ray (2002), Ray and Lancaster (2005) for similar evidence on poverty rates.

data sets agree that there has been a decline in deprivation over this period. Note also that both the data sets, especially the NSS, suggest that while the progress has been fairly even between the rural and urban areas in the first half, i.e. between the first two rounds of each survey, the improvement in urban deprivation has been much less than the rural in the post reform years, i.e. between rounds 2 and 3 in both data sets. Fig. 3 is a vivid reminder of the result that the omission of health deprivation, that limits the NSS evidence, leads to a significant understatement of the magnitude of deprivation in relation to the NFHS. Note, for example, from a comparison of their intercepts that, in relation to the NFHS which has health information and takes a wider basket of deprivation dimensions, NSS gives a misleadingly high proportion of households who are deprived in no dimension. It is also interesting to note from Fig. 3 that the gap between the D curves of the NSS and NFHS, in the initial range of dimensions, is much larger in the urban areas than in the rural, though the gap does remain quite large in both areas.

Place Figure 1, Figure 2 and Figure 3 here

The population share deflated contribution to all India deprivation by the various states is presented for various α values in Table 16 for NSS (rural, urban) and in Table 17 for NFHS (rural, urban). A value greater than one denotes that the state is more deprived than the country as a whole, and less deprived if the value is less than one. This is also true of the comparison between the SC/ST and non SC/ST households. There is some, though by no means universal, agreement between the NSS and NFHS data sets on the spectrum of backwardness of the various states. Clearly, the inclusion of anthropometric information based health deprivation combined with a wider basket of deprivation dimensions does affect the state rankings and the picture on backwardness. For example, if we focus on NSS, 61st round, and NFHS-3, urban Assam turns out to be less deprived than the rest on NSS, but once we bring in health and expand on the non health indicators, urban Assam deteriorates markedly, especially at higher values of α. In line with our earlier discussion, the measure of backwardness of the SC/ST households increases markedly, as α increases, which confirms that these socio economic groups fall further and further behind the non SC/ST households if we restrict the comparison to the more deprived households.

Place Table 16 and Table 17 here

The results of this study suggest that deprivation declines as we move from the poorer to the more affluent states. Figures 4 provides graphical account of this relationship by plotting the deprivation measure, $\pi(\alpha)$, against state per capita household expenditure[14] (obtained from the NSS) at α values of 1 and 3. The figure allows comparison between the graphs for NSS, 61st round and NFHS-3. The graphs confirm the negative relationship for both data sets and for both α values. Three interesting features are worth noting: first, the downward sloping graphs seem to flatten out at some point which suggests that relying solely on overall economic prosperity will not drive deprivation to zero or to negligible values- more interventionist policy and direct anti deprivation measures need to be implemented; second, as we increase α, i.e. if we consider the more deprived households, economic progress leads to a faster decline in the NFHS based deprivation by nudging them from "severely deprived" to "moderately deprived" group of households[15]; third, in case of the poorer states, the gap between NFHS based deprivation and NSS based deprivation is much larger for higher values of α but the gap declines much faster for the higher α value as we move from the poorer to the more affluent states. The last feature is not surprising since health deprivation ,which drives the wedge between the NSS and the NFHS deprivation rates, especially, for the more deprived households , matters much less in case of the more affluent states.

Place Figure 4 here

Treating the states as a 15 strong panel, formal evidence on the relationship between the state level multidimensional deprivation and some key variables such as income and literacy rates is presented in Table 18. It reports, on the pooled NSS data set (over all the three rounds) and at two distinct values of α (1 and 3), the random effects estimates of the regression of log $\pi(\alpha)$ on log of per capita state income , log of literacy rate, log of the proportion of households that

[14] For the purpose of these graphs, we have pooled the rural and urban data and treated the rural and urban areas of the state as separate points, giving us a scatter of 30 points for each data set.

[15] Since the decline is much less rapid for the NSS, this suggests that the improvement in the deprivation occurs mainly because of the health based deprivation dimensions.

belong to SC/ST in that state, and time that acts as a proxy for all other time varying characteristics. The following features are worth noting. First, and consistent with our earlier remarks, income improvement does lead to a decline in deprivation. However, the absolute values of the income elasticity of deprivation obtained here are much lower than those of the income elasticity of head count poverty rate reported in the literature [see, for example, Datt and Ravallion (2002)].[16] Second, consistent with the graphs presented in Figures 4, the income elasticity of deprivation increases as the value of α increases, i.e. if we consider the more deprived households. Third, the urban elasticity magnitudes are higher than the rural which suggest that urban deprivation is marginally more responsive to economic progress. Fourth, the significance of the time coefficient in the rural areas, unlike in the urban areas, suggest that, after controlling for the income increase, while rural deprivation has declined significantly, this cannot be said of urban deprivation. Finally, in a significant result, a ceteris paribus improvement in state literacy does not have the expected negative effect on deprivation in either the rural or the urban areas.

Place Table 18 here

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5. Summary and Conclusions

This study was motivated by an attempt to assess changes in living standards in India during and after the period of recent economic reforms using a larger set of indicators than has been commonly used in the literature. This study is in line with recent attempts to include a wider range of deprivation indicators, through the use of multi dimensional deprivation measures, than have been considered in previous studies on India that have relied on uni dimensional measures such as poverty rates or rates of under nutrition. The following distinguishing features of this study are worth noting. First, this study examines the robustness of the evidence by employing two parallel data sets, namely, the widely used NSS and the more recent NFHS data sets. The study exploits the fact that the NSS and the NFHS rounds, though

[16] While there is evidence in the literature on the elasticity of poverty with respect to income, this is possibly one of the first studies to provide evidence on the elasticity of multidimensional deprivation to aggregate income.

not held over identical time periods, were conducted over proximate periods. Besides allowing comparison between the NSS based and the NFHS based evidence on deprivation, this study provides evidence on the relative magnitude of health deprivation as a proportion of overall deprivation. The study extends that to evaluating the relative contribution of all the deprivation dimensions, including both health and non health dimensions, to overall deprivation. Second, the study provides evidence on the relative contribution of each state to total deprivation at the all India level; it provides a methodology for evaluating the relative backwardness of a state in terms of its residents suffering higher deprivation than those in the rest of India. Third, the study is possibly the first of its kind in providing evidence on the deprivation, especially health deprivation, of SC/ST households in relation to the other households. Finally, the study exploits the fact that the states constitute a panel and provides panel evidence, where there is currently none, on the income elasticity of deprivation.

The study provides robust evidence that shows that multi dimensional deprivation in India declined during the chosen period. However, the decline was uneven both between the reforms (1993/94-1999/2000) and the post reforms (1999/2000- 2004/5) periods, and between the rural and urban areas. While the rural areas experienced improvements throughout the entire time period, the progress in the urban areas slowed down sharply, or even registered a small decline, in the second half, i.e., .during the post reforms period. Lack of access to drinking water, lack of access to clean fuel for cooking, among the non health dimensions, and stunted children, among the health dimensions, were some of the more significant sources of deprivation in both the rural and the urban areas. The lack of significant progress in the area of child stunting is a matter of much concern in India, as is the result that the SC/ST households register much higher rates of stunted children than the other socio economic groups. The expenditure based deprivation dimensions account for a relatively minor share of total deprivations, so the earlier literature's exclusive focus on this in assessing changes in living standards was misplaced and gave a very limited picture, if not a misleading one.

The panel estimates confirmed that economic progress, as measured by income increase, does lead to decline in deprivation. However, the income elasticity estimates of multi dimensional deprivation are of much smaller magnitude than those of the income elasticity of poverty that are available for India. This suggests that income growth alone will not drive the deprivations

down sharply, a fact confirmed by the graphs on the relationships between the state level deprivation and per capita income.

This study is perhaps the first to simultaneously employ two parallel and large data sets that contain between themselves a great deal of information, that are both qualitative and quantitative, on a range of items. Besides allowing an examination of the robustness of the evidence and a check of consistency between the two data sets, the results underline the importance of considering the health deprivations along with the expenditure and the non expenditure, non health dimensions in a comprehensive study such as the one attempted here. The wide range of deprivation indicators considered in this study, that is based on two parallel and contemporaneous data sets, allow a wider perspective than that provided by the earlier studies on changes to living standards in India using uni dimensional income or expenditure based measures. The results of this study have considerable policy significance by identifying population subgroups, whether by state of residence, by rural or urban residence, or by socio economic groups, that suffer higher levels of deprivation than the others. The study also identifies the deprivation dimensions that are significant sources of deprivation in India.

India is fortunate in having two such large sources of information. These two data sources complement one another in the range of information that they provide. With the NSS slanted towards expenditure and related information at the household level, and the NFHS slanted towards health and health related information, this study exploits the wide range of information that is obtained by simultaneously using both these surveys and over near identical time periods. The results of this study point to the huge potential that exists in further exploiting both these data sets. The next step is to combine the information from these two data sets in an extension of this exercise. The methodology and results of this study are also of interest for other countries that collect and make available household level information on expenditure, non expenditure and health indicators. For those countries that don't provide such wide ranging information, the need to provide a wider perspective makes the collection of such information vital for policy formulation.

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Tables

Table 1: Dimension Specific Head-Count Rates for Rural Areas

States	Head-Count Ratio in Deprivation Dimension↓														
	50th Round NSS					55th Round NSS					61st Round NSS				
	Clean Fuel for Cooking	Electricity for Lighting	Education of Head of Household Head[a]	Food Expenditure[b]	Clothing Expenditure[b,c]	Clean Fuel	Electricity for Lighting	Education of Head of Household Head[a]	Food Expenditure[b]	Clothing Expenditure[b,c]	Clean Fuel	Electricity for Lighting	Education of Head of Household Head[a]	Food Expenditure[b]	Clothing Expenditure[b,c]
Andhra Pradesh	0.93	0.44	0.74	0.03	0.20	0.88	0.31	0.75	0.02	0.13	0.79	0.15	0.62	0.04	0.14
Assam[d]	0.97	0.67	0.55	0.02	0.15	0.93	0.63	0.57	0.03	0.13	0.89	0.41	0.38	0.01	0.11
Bihar[d]	0.94	0.92	0.70	0.03	0.15	0.92	0.93	0.70	0.01	0.11	0.90	0.82	0.54	0.02	0.08
Gujarat	0.89	0.30	0.64	0.05	0.13	0.82	0.19	0.61	0.02	0.11	0.75	0.16	0.44	0.04	0.08
Jammu & Kashmir	0.89	0.19	0.64	0.02	0.09	0.69	0.03	0.50	0.01	0.13	0.82	0.02	0.54	0.01	0.06
Karnataka	0.95	0.40	0.69	0.05	0.15	0.88	0.23	0.63	0.04	0.12	0.89	0.12	0.54	0.02	0.07
Kerala	0.91	0.38	0.35	0.06	0.23	0.83	0.30	0.39	0.04	0.15	0.78	0.18	0.27	0.06	0.13
Madhya Pradesh[d]	0.99	0.51	0.75	0.05	0.14	0.96	0.34	0.69	0.03	0.10	0.94	0.29	0.53	0.03	0.11
Maharashtra	0.79	0.37	0.57	0.07	0.12	0.74	0.24	0.51	0.02	0.11	0.73	0.19	0.38	0.04	0.08
Orissa	0.95	0.79	0.75	0.03	0.16	0.96	0.75	0.71	0.03	0.14	0.88	0.60	0.57	0.04	0.11
Punjab[d]	0.88	0.12	0.62	0.04	0.18	0.72	0.08	0.54	0.02	0.12	0.73	0.05	0.45	0.03	0.08
Rajasthan	0.96	0.55	0.75	0.05	0.11	0.94	0.48	0.68	0.01	0.08	0.93	0.49	0.62	0.03	0.06
Tamil Nadu	0.93	0.41	0.61	0.05	0.16	0.84	0.24	0.58	0.05	0.13	0.78	0.13	0.45	0.04	0.09
Uttar Pradesh[d]	0.96	0.78	0.68	0.05	0.15	0.91	0.73	0.60	0.02	0.10	0.90	0.65	0.52	0.03	0.09
West Bengal	0.79	0.84	0.59	0.02	0.13	0.90	0.74	0.57	0.03	0.10	0.80	0.60	0.49	0.02	0.10
C.V.[e]	**0.07**	**0.47**	**0.16**	**0.38**	**0.23**	**0.10**	**0.67**	**0.16**	**0.41**	**0.16**	**0.09**	**0.78**	**0.20**	**0.45**	**0.25**
All India	**0.92**	**0.57**	**0.64**	**0.04**	**0.15**	**0.87**	**0.47**	**0.61**	**0.02**	**0.12**	**0.83**	**0.36**	**0.48**	**0.03**	**0.10**
SC/ST	**0.95**	**0.71**	**0.77**	**0.07**	**0.21**	**0.94**	**0.61**	**0.74**	**0.04**	**0.16**	**0.91**	**0.47**	**0.59**	**0.05**	**0.14**
Non SC/ST	**0.91**	**0.51**	**0.59**	**0.03**	**0.13**	**0.85**	**0.41**	**0.56**	**0.02**	**0.09**	**0.80**	**0.31**	**0.43**	**0.02**	**0.08**

a. If the education of the head of the household is below primary, he is considered to be deprived.

b. For food, clothing and transport export expenditure, the threshold for being deprived is half of the median expenditure per capita on the respective category for that state.

c. For food expenditure, recall period is 30 days while for Clothing expenditure, it is 365 days.

d. Assam includes Manipur, Meghalaya and Tripura; Punjab includes Haryana, Himachal Pradesh and Delhi; Uttar Pradesh, Madhya Pradesh and Bihar include Uttaranchal, Chhattisgarh and Jharkhand since their inception (here only for 61st round).

e. Coefficient of Variation

Table 2: Dimension Specific Head-Count Rates for Urban Areas

States	Head-Count Ratio in Deprivation Dimension↓														
	50th Round NSS					55th Round NSS					61st Round NSS				
	Clean Fuel for Cooking	Electricity for Lighting	Education of Head of Household Head[a]	Food Expenditure[b]	Clothing Expenditure[b,c]	Clean Fuel	Electricity for Lighting	Education of Head of Household Head[a]	Food Expenditure[b]	Clothing Expenditure[b,c]	Clean Fuel	Electricity for Lighting	Education of Head of Household Head[a]	Food Expenditure[b]	Clothing Expenditure[b,c]
Andhra Pradesh	0.43	0.15	0.41	0.05	0.21	0.28	0.08	0.35	0.03	0.16	0.37	0.07	0.39	0.04	0.18
Assam[d]	0.59	0.18	0.23	0.02	0.21	0.38	0.13	0.24	0.02	0.19	0.41	0.10	0.22	0.01	0.17
Bihar[d]	0.70	0.33	0.38	0.04	0.17	0.59	0.29	0.36	0.03	0.17	0.56	0.30	0.33	0.04	0.15
Gujarat	0.22	0.10	0.33	0.05	0.17	0.17	0.06	0.29	0.02	0.12	0.22	0.06	0.25	0.03	0.12
Jammu & Kashmir	0.19	0.01	0.23	0.02	0.19	0.13	0.02	0.27	0.00	0.12	0.21	0.01	0.30	0.02	0.09
Karnataka	0.42	0.15	0.33	0.07	0.19	0.32	0.09	0.29	0.05	0.15	0.38	0.06	0.28	0.05	0.12
Kerala	0.74	0.21	0.29	0.06	0.23	0.58	0.11	0.23	0.05	0.16	0.59	0.09	0.23	0.09	0.13
Madhya Pradesh[d]	0.49	0.12	0.35	0.05	0.16	0.41	0.06	0.35	0.04	0.10	0.49	0.07	0.33	0.04	0.12
Maharashtra	0.20	0.08	0.24	0.11	0.16	0.17	0.04	0.23	0.06	0.13	0.22	0.05	0.20	0.09	0.11
Orissa	0.62	0.28	0.37	0.06	0.18	0.53	0.27	0.38	0.04	0.16	0.57	0.23	0.37	0.04	0.14
Punjab[d]	0.22	0.04	0.28	0.07	0.18	0.15	0.03	0.28	0.04	0.15	0.17	0.03	0.25	0.05	0.13
Rajasthan	0.43	0.10	0.38	0.06	0.16	0.32	0.07	0.32	0.02	0.13	0.44	0.09	0.33	0.03	0.07
Tamil Nadu	0.50	0.18	0.35	0.06	0.18	0.29	0.08	0.28	0.07	0.16	0.31	0.06	0.27	0.06	0.13
Uttar Pradesh[d]	0.50	0.23	0.41	0.05	0.16	0.43	0.18	0.40	0.04	0.13	0.44	0.20	0.36	0.05	0.13
West Bengal	0.47	0.26	0.33	0.05	0.17	0.43	0.18	0.32	0.03	0.15	0.43	0.16	0.29	0.04	0.13
C.V.[e]	**0.40**	**0.56**	**0.19**	**0.38**	**0.11**	**0.44**	**0.74**	**0.18**	**0.49**	**0.15**	**0.35**	**0.79**	**0.20**	**0.48**	**0.22**
All India	**0.43**	**0.15**	**0.32**	**0.06**	**0.18**	**0.32**	**0.10**	**0.30**	**0.04**	**0.14**	**0.35**	**0.09**	**0.28**	**0.05**	**0.13**
SC/ST	**0.62**	**0.30**	**0.51**	**0.12**	**0.27**	**0.52**	**0.21**	**0.49**	**0.07**	**0.23**	**0.53**	**0.18**	**0.42**	**0.08**	**0.18**
Non SC/ST	**0.40**	**0.13**	**0.29**	**0.05**	**0.16**	**0.18**	**0.08**	**0.26**	**0.03**	**0.13**	**0.32**	**0.08**	**0.24**	**0.04**	**0.12**

a. If the education of the head of the household is below primary, he is considered to be deprived.

b. For food, clothing and transport export expenditure, the threshold for being deprived is half of the median expenditure per capita on the respective category for that state.

c. For food expenditure, recall period is 30 days while for Clothing expenditure, it is 365 days.

d. Assam includes Manipur, Meghalaya and Tripura; Punjab includes Haryana, Himachal Pradesh and Delhi; Uttar Pradesh, Madhya Pradesh and Bihar include Uttaranchal, Chhattisgarh and Jharkhand since their inception (here only for 61st round).

e. Coefficient of Variation

Table 3: Dimension Specific Head-Count Rates for Rural Areas NFHS 1

States	Head-Count Ratio in Deprivation Dimension↓												
	Access to Source of Drinking Water on its Premises	Access to Electricity for Lighting	Access to Clean Fuel for Cooking	Access to 'Pucca' House	Access to Toilet Facility	Education of the Head of the Household Head[a]	Access to Bicycle	Access to Radio	Belongs to Poorest Wealth Quintile	Share of Stunted Children[b]	Share of Wasted Children[b]	BMI of the Mother[c]	Share of Anaemic Children[b]
Andhra Pradesh	0.88	0.46	0.95	0.81	0.92	0.62	0.71	0.65	0.17	N.A	N.A.	N.A.	N.A.
Assam[d]	0.72	0.72	0.95	0.99	0.45	0.42	0.65	0.70	0.22	0.45	0.12	N.A.	N.A.
Bihar[d]	0.62	0.93	0.99	0.93	0.92	0.61	0.66	0.79	0.37	0.58	0.18	N.A.	N.A.
Gujarat	0.62	0.30	0.82	0.81	0.83	0.44	0.68	0.69	0.16	0.44	0.18	N.A.	N.A.
Jammu & Kashmir	0.68	0.16	0.84	0.78	0.94	0.52	0.78	0.41	0.10	0.37	0.12	N.A.	N.A.
Karnataka	0.84	0.47	0.95	0.95	0.91	0.54	0.73	0.57	0.17	0.44	0.14	N.A.	N.A.
Kerala	0.38	0.46	0.94	0.84	0.34	0.18	0.79	0.42	0.02	0.25	0.11	N.A.	N.A.
Madhya Pradesh[d]	0.87	0.47	0.98	0.97	0.95	0.58	0.58	0.77	0.32	N.A	N.A.	N.A.	N.A.
Maharashtra	0.74	0.37	0.89	0.93	0.90	0.45	0.66	0.68	0.19	0.47	0.18	N.A.	N.A.
Orissa	0.86	0.80	0.98	0.95	0.95	0.52	0.54	0.73	0.34	0.47	0.20	N.A.	N.A.
Punjab[d]	0.57	0.12	0.89	0.70	0.86	0.52	0.53	0.54	0.03	0.37	0.11	N.A.	N.A.
Rajasthan	0.80	0.58	0.98	0.75	0.93	0.65	0.72	0.75	0.36	0.39	0.16	N.A.	N.A.
Tamil Nadu	0.82	0.45	0.94	0.86	0.92	0.42	0.65	0.65	0.11	N.A	N.A.	N.A.	N.A.
Uttar Pradesh[d]	0.57	0.80	0.99	0.92	0.93	0.55	0.46	0.72	0.37	0.57	0.14	N.A.	N.A.
West Bengal	0.77	0.86	0.99	0.90	0.81	0.46	0.52	0.63	0.37	N.A	N.A.	N.A.	N.A.
C.V.[e]	**0.20**	**0.47**	**0.06**	**0.10**	**0.22**	**0.23**	**0.16**	**0.18**	**0.58**	**0.21**	**0.22**	N.A.	N.A.
All India	**0.70**	**0.55**	**0.95**	**0.87**	**0.84**	**0.51**	**0.62**	**0.66**	**0.23**	**0.47**	**0.15**	**N.A.**	**N.A.**
SC/ST	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**N.A.**
Non SC/ST	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**N.A.**

a. If the education of the head of the household is below primary, he is considered to be deprived.

b. For share of stunted, wasted and anaemic children in a household, the threshold for being deprived is 60 percent or more of the total children in the household. It has to be noted that for calculating 'share of anaemic children', only children suffering from severe anaemia are considered to be deprived.

c. If the BMI of the mother is less than 18.5 and more than 30, she is considered to be deprived.

d. Assam includes Manipur, Meghalaya and Tripura; Punjab includes Haryana, Himachal Pradesh and Delhi; Uttar Pradesh, Madhya Pradesh and Bihar include Uttaranchal, Chhattisgarh and Jharkhand since their inception (here only for NFHS3).

e. Coefficient of Variation

Table 4: Dimension Specific Head-Count Rates for Rural Areas NFHS 2

States	Head-Count Ratio in Deprivation Dimension↓												
	Access to Source of Drinking Water on its Premises	Access to Electricity for Lighting	Access to Clean Fuel for Cooking	Access to 'Pucca' House	Access to Toilet Facility	Education of the Head of the Household Head[a]	Access to Bicycle	Access to Radio	Belongs to Poorest Wealth Quintile	Share of Stunted Children[b]	Share of Wasted Children[b]	BMI of the Mother[c]	Share of Anaemic Children[b]
Andhra Pradesh	0.88	0.32	0.89	0.70	0.88	0.56	0.63	0.68	0.25	0.40	0.09	0.51	N.A.
Assam[d]	0.77	0.61	0.92	0.94	0.32	0.35	0.59	0.67	0.18	0.41	0.11	0.28	N.A.
Bihar[d]	0.57	0.89	0.97	0.90	0.90	0.52	0.57	0.74	0.49	0.52	0.20	0.38	N.A.
Gujarat	0.58	0.23	0.82	0.76	0.79	0.38	0.58	0.73	0.15	0.44	0.16	0.52	N.A.
Jammu & Kashmir	0.60	0.13	0.82	0.73	0.60	0.48	0.79	0.38	0.04	0.39	0.11	0.34	N.A.
Karnataka	0.86	0.27	0.91	0.75	0.86	0.49	0.64	0.56	0.20	0.37	0.21	0.47	N.A.
Kerala	0.90	0.33	0.87	0.23	0.17	0.16	0.74	0.36	0.03	0.19	0.12	0.24	N.A.
Madhya Pradesh[d]	0.89	0.39	0.95	0.91	0.92	0.43	0.55	0.82	0.27	0.52	0.19	0.40	N.A.
Maharashtra	0.75	0.28	0.83	0.91	0.85	0.32	0.61	0.74	0.23	0.41	0.23	0.53	N.A.
Orissa	0.92	0.71	0.95	0.88	0.92	0.41	0.45	0.71	0.53	0.43	0.24	0.49	N.A.
Punjab[d]	0.50	0.08	0.78	0.70	0.75	0.43	0.46	0.56	0.01	0.43	0.09	0.33	N.A.
Rajasthan	0.80	0.46	0.96	0.71	0.89	0.53	0.60	0.73	0.26	0.53	0.12	0.39	N.A.
Tamil Nadu	0.88	0.28	0.87	0.81	0.87	0.36	0.52	0.56	0.19	0.30	0.18	0.36	N.A.
Uttar Pradesh[d]	0.53	0.77	0.96	0.87	0.88	0.46	0.40	0.72	0.34	0.54	0.10	0.38	N.A.
West Bengal	0.75	0.81	0.96	0.84	0.72	0.40	0.47	0.67	0.39	0.44	0.13	0.57	N.A.
C.V.[e]	**0.20**	**0.59**	**0.07**	**0.22**	**0.30**	**0.24**	**0.18**	**0.21**	**0.65**	**0.22**	**0.34**	**0.24**	N.A.
All India	**0.72**	**0.48**	**0.91**	**0.80**	**0.77**	**0.43**	**0.55**	**0.67**	**0.25**	**0.45**	**0.15**	**0.40**	**N.A.**
SC/ST	**0.82**	**0.58**	**0.96**	**0.89**	**0.86**	**0.54**	**0.62**	**0.76**	**0.37**	**0.50**	**0.17**	**0.43**	**N.A.**
Non SC/ST	**0.67**	**0.43**	**0.88**	**0.76**	**0.73**	**0.38**	**0.51**	**0.62**	**0.20**	**0.43**	**0.14**	**0.38**	**N.A.**

a. If the education of the head of the household is below primary, he is considered to be deprived.

b. For share of stunted, wasted and anaemic children in a household, the threshold for being deprived is 60 percent or more of the total children in the household. It has to be noted that for calculating 'share of anaemic children', only children suffering from severe anaemia are considered to be deprived.

c. If the BMI of the mother is less than 18.5 and more than 30, she is considered to be deprived.

d. Assam includes Manipur, Meghalaya and Tripura; Punjab includes Haryana, Himachal Pradesh and Delhi; Uttar Pradesh, Madhya Pradesh and Bihar include Uttaranchal, Chhattisgarh and Jharkhand since their inception (here only for NFHS3).

e. Coefficient of Variation

Table 5: Dimension Specific Head-Count Rates for Rural Areas NFHS 3

States	Head-Count Ratio in Deprivation Dimension↓												
	Access to Source of Drinking Water on its Premises	Access to Electricity for Lighting	Access to Clean Fuel for Cooking	Access to 'Pucca' House	Access to Toilet Facility	Education of the Head of the Household Head[a]	Access to Bicycle	Access to Radio	Belongs to Poorest Wealth Quintile	Share of Stunted Children[b]	Share of Wasted Children[b]	BMI of the Mother[c]	Share of Anaemic Children[b]
Andhra Pradesh	0.81	0.15	0.83	0.55	0.73	0.53	0.55	0.85	0.16	0.38	0.09	0.47	0.02
Assam[d]	0.95	0.43	0.84	0.88	0.19	0.33	0.49	0.62	0.15	0.33	0.13	0.28	0.01
Bihar[d]	1.00	0.81	0.97	0.88	0.84	0.60	0.47	0.71	0.35	0.44	0.18	0.46	0.01
Gujarat	0.53	0.17	0.78	0.51	0.70	0.37	0.49	0.76	0.12	0.42	0.14	0.49	0.03
Jammu & Kashmir	0.70	0.10	0.80	0.60	0.49	0.44	0.80	0.35	0.04	0.26	0.11	0.32	0.02
Karnataka	0.84	0.16	0.89	0.62	0.78	0.50	0.61	0.71	0.17	0.37	0.14	0.42	0.02
Kerala	0.93	0.11	0.79	0.17	0.05	0.12	0.63	0.48	0.02	0.17	0.13	0.18	0.00
Madhya Pradesh[d]	0.97	0.36	0.97	0.91	0.92	0.49	0.44	0.82	0.52	0.42	0.20	0.46	0.02
Maharashtra	0.63	0.29	0.81	0.69	0.80	0.34	0.55	0.75	0.22	0.38	0.11	0.46	0.02
Orissa	1.00	0.62	0.97	0.74	0.89	0.43	0.37	0.80	0.48	0.36	0.13	0.45	0.01
Punjab[d]	0.65	0.06	0.81	0.49	0.55	0.39	0.45	0.64	0.03	0.29	0.10	0.32	0.02
Rajasthan	0.86	0.46	0.97	0.65	0.92	0.55	0.60	0.80	0.35	0.36	0.14	0.37	0.05
Tamil Nadu	0.85	0.16	0.83	0.40	0.83	0.37	0.50	0.66	0.19	0.22	0.17	0.35	0.02
Uttar Pradesh[d]	0.99	0.72	0.96	0.87	0.84	0.50	0.24	0.69	0.36	0.46	0.08	0.38	0.02
West Bengal	0.99	0.65	0.97	0.81	0.55	0.45	0.35	0.70	0.36	0.34	0.13	0.48	0.01
C.V.[e]	**0.18**	**0.72**	**0.09**	**0.32**	**0.39**	**0.28**	**0.27**	**0.19**	**0.69**	**0.23**	**0.25**	**0.23**	**0.58**
All India	**0.86**	**0.36**	**0.88**	**0.69**	**0.66**	**0.43**	**0.47**	**0.69**	**0.24**	**0.36**	**0.13**	**0.39**	**0.02**
SC/ST	**0.90**	**0.45**	**0.94**	**0.79**	**0.76**	**0.52**	**0.55**	**0.77**	**0.36**	**0.41**	**0.15**	**0.42**	**0.02**
Non SC/ST	**0.84**	**0.32**	**0.86**	**0.63**	**0.61**	**0.38**	**0.44**	**0.66**	**0.18**	**0.34**	**0.12**	**0.37**	**0.02**

a. If the education of the head of the household is below primary, he is considered to be deprived.

b. For share of stunted, wasted and anaemic children in a household, the threshold for being deprived is 60 percent or more of the total children in the household. It has to be noted that for calculating 'share of anaemic children', only children suffering from severe anaemia are considered to be deprived.

c. If the BMI of the mother is less than 18.5 and more than 30, she is considered to be deprived.

d. Assam includes Manipur, Meghalaya and Tripura; Punjab includes Haryana, Himachal Pradesh and Delhi; Uttar Pradesh, Madhya Pradesh and Bihar include Uttaranchal, Chhattisgarh and Jharkhand since their inception (here only for NFHS3).

e. Coefficient of Variation

Table 6: Dimension Specific Head-Count Rates for Urban Areas NFHS 1

States	Head-Count Ratio in Deprivation Dimension↓												
	Access to Source of Drinking Water on its Premises	Access to Electricity for Lighting	Access to Clean Fuel for Cooking	Access to 'Pucca' House	Access to Toilet Facility	Education of the Head of the Household Head[a]	Access to Bicycle	Access to Radio	Belongs to Poorest Wealth Quintile	Share of Stunted Children[b]	Share of Wasted Children[b]	BMI of the Mother[c]	Share of Anaemic Children[b]
Andhra Pradesh	0.51	0.15	0.37	0.35	0.30	0.25	0.44	0.35	0.01	N.A.	N.A.	N.A.	N.A.
Assam[d]	0.40	0.27	0.55	0.88	0.06	0.19	0.45	0.43	0.02	0.31	0.07	N.A.	N.A.
Bihar[d]	0.36	0.34	0.65	0.43	0.35	0.26	0.40	0.45	0.05	0.49	0.18	N.A.	N.A.
Gujarat	0.32	0.12	0.28	0.41	0.29	0.23	0.42	0.41	0.00	0.39	0.14	N.A.	N.A.
Jammu & Kashmir	0.18	0.00	0.16	0.21	0.23	0.22	0.60	0.21	0.00	0.27	0.09	N.A.	N.A.
Karnataka	0.45	0.15	0.41	0.62	0.26	0.24	0.49	0.31	0.02	0.35	0.14	N.A.	N.A.
Kerala	0.34	0.24	0.75	0.69	0.16	0.15	0.64	0.35	0.00	0.18	0.09	N.A.	N.A.
Madhya Pradesh[d]	0.39	0.10	0.46	0.51	0.25	0.22	0.31	0.42	0.01	N.A.	N.A.	N.A.	N.A.
Maharashtra	0.33	0.13	0.17	0.39	0.18	0.18	0.58	0.42	0.01	0.34	0.13	N.A.	N.A.
Orissa	0.59	0.31	0.68	0.68	0.50	0.25	0.31	0.45	0.03	0.30	0.14	N.A.	N.A.
Punjab[d]	0.21	0.04	0.18	0.22	0.19	0.21	0.42	0.33	0.00	0.37	0.09	N.A.	N.A.
Rajasthan	0.27	0.13	0.48	0.16	0.34	0.31	0.48	0.41	0.03	0.40	0.26	N.A.	N.A.
Tamil Nadu	0.55	0.19	0.48	0.59	0.30	0.18	0.51	0.38	0.01	N.A.	N.A.	N.A.	N.A.
Uttar Pradesh[d]	0.18	0.19	0.47	0.33	0.20	0.28	0.35	0.45	0.02	0.49	0.12	N.A.	N.A.
West Bengal	0.60	0.29	0.60	0.49	0.17	0.24	0.51	0.45	0.04	N.A.	N.A.	N.A.	N.A.
C.V.[e]	**0.37**	**0.56**	**0.42**	**0.44**	**0.41**	**0.18**	**0.22**	**0.18**	**0.92**	**0.26**	**0.39**	N.A.	N.A.
All India	**0.34**	**0.15**	**0.39**	**0.43**	**0.23**	**0.22**	**0.45**	**0.38**	**0.01**	**0.37**	**0.12**	**N.A.**	**N.A.**
SC/ST	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**N.A.**
Non SC/ST	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**N.A.**

a. If the education of the head of the household is below primary, he is considered to be deprived.

b. For share of stunted, wasted and anaemic children in a household, the threshold for being deprived is 60 percent or more of the total children in the household. It has to be noted that for calculating 'share of anaemic children', only children suffering from severe anaemia are considered to be deprived.

c. If the BMI of the mother is less than 18.5 and more than 30, she is considered to be deprived.

d. Assam includes Manipur, Meghalaya and Tripura; Punjab includes Haryana, Himachal Pradesh and Delhi; Uttar Pradesh, Madhya Pradesh and Bihar include Uttaranchal, Chhattisgarh and Jharkhand since their inception (here only for NFHS3).

e. Coefficient of Variation

Table 7: Dimension Specific Head-Count Rates for Urban Areas NFHS 2

States	Head-Count Ratio in Deprivation Dimension↓												
	Access to Source of Drinking Water on its Premises	Access to Electricity for Lighting	Access to Clean Fuel for Cooking	Access to 'Pucca' House	Access to Toilet Facility	Education of the Head of the Household Head[a]	Access to Bicycle	Access to Radio	Belongs to Poorest Wealth Quintile	Share of Stunted Children[b]	Share of Wasted Children[b]	BMI of the Mother[c]	Share of Anaemic Children[b]
Andhra Pradesh	0.54	0.08	0.30	0.30	0.28	0.24	0.38	0.55	0.03	0.27	0.08	0.34	N.A.
Assam[d]	0.45	0.15	0.38	0.70	0.03	0.14	0.45	0.49	0.02	0.31	0.08	0.28	N.A.
Bihar[d]	0.36	0.28	0.63	0.43	0.34	0.24	0.35	0.51	0.06	0.41	0.16	0.37	N.A.
Gujarat	0.21	0.06	0.20	0.26	0.23	0.17	0.30	0.55	0.02	0.35	0.10	0.34	N.A.
Jammu & Kashmir	0.11	0.01	0.12	0.34	0.12	0.26	0.52	0.22	0.00	0.26	0.07	0.22	N.A.
Karnataka	0.42	0.06	0.28	0.31	0.19	0.18	0.37	0.36	0.03	0.29	0.14	0.32	N.A.
Kerala	0.77	0.12	0.65	0.11	0.07	0.09	0.49	0.28	0.01	0.16	0.07	0.24	N.A.
Madhya Pradesh[d]	0.50	0.07	0.42	0.49	0.34	0.19	0.31	0.58	0.03	0.37	0.17	0.35	N.A.
Maharashtra	0.28	0.02	0.07	0.42	0.08	0.15	0.62	0.45	0.01	0.26	0.13	0.35	N.A.
Orissa	0.69	0.25	0.48	0.59	0.45	0.23	0.26	0.53	0.17	0.34	0.24	0.41	N.A.
Punjab[d]	0.14	0.01	0.09	0.16	0.09	0.16	0.32	0.36	0.00	0.32	0.08	0.24	N.A.
Rajasthan	0.20	0.06	0.39	0.25	0.23	0.23	0.36	0.50	0.01	0.39	0.08	0.35	N.A.
Tamil Nadu	0.54	0.09	0.22	0.51	0.20	0.14	0.41	0.40	0.03	0.28	0.17	0.24	N.A.
Uttar Pradesh[d]	0.21	0.13	0.38	0.26	0.17	0.23	0.30	0.51	0.02	0.44	0.09	0.30	N.A.
West Bengal	0.58	0.12	0.31	0.15	0.06	0.15	0.49	0.46	0.02	0.24	0.09	0.33	N.A.
C.V.[e]	**0.51**	**0.79**	**0.54**	**0.48**	**0.64**	**0.27**	**0.25**	**0.24**	**1.34**	**0.23**	**0.43**	**0.18**	N.A.
All India	**0.35**	**0.08**	**0.26**	**0.33**	**0.16**	**0.18**	**0.40**	**0.44**	**0.02**	**0.32**	**0.12**	**0.31**	**N.A.**
SC/ST	**0.51**	**0.15**	**0.42**	**0.51**	**0.31**	**0.28**	**0.50**	**0.58**	**0.06**	**0.40**	**0.13**	**0.36**	**N.A.**
Non SC/ST	**0.32**	**0.06**	**0.22**	**0.29**	**0.12**	**0.15**	**0.38**	**0.41**	**0.01**	**0.30**	**0.11**	**0.29**	**N.A.**

a. If the education of the head of the household is below primary, he is considered to be deprived.

b. For share of stunted, wasted and anaemic children in a household, the threshold for being deprived is 60 percent or more of the total children in the household. It has to be noted that for calculating 'share of anaemic children', only children suffering from severe anaemia are considered to be deprived.

c. If the BMI of the mother is less than 18.5 and more than 30, she is considered to be deprived.

d. Assam includes Manipur, Meghalaya and Tripura; Punjab includes Haryana, Himachal Pradesh and Delhi; Uttar Pradesh, Madhya Pradesh and Bihar include Uttaranchal, Chhattisgarh and Jharkhand since their inception (here only for NFHS3).

e. Coefficient of Variation

Table 8: Dimension Specific Head-Count Rates for Urban Areas NFHS 3

States	Head-Count Ratio in Deprivation Dimension↓												
	Access to Source of Drinking Water on its Premises	Access to Electricity for Lighting	Access to Clean Fuel for Cooking	Access to 'Pucca' House	Access to Toilet Facility	Education of the Head of the Household Head[a]	Access to Bicycle	Access to Radio	Belongs to Poorest Wealth Quintile	Share of Stunted Children[b]	Share of Wasted Children[b]	BMI of the Mother[c]	Share of Anaemic Children[b]
Andhra Pradesh	0.27	0.03	0.17	0.11	0.10	0.26	0.42	0.76	0.02	0.24	0.07	0.26	0.02
Assam[d]	0.68	0.11	0.35	0.61	0.01	0.16	0.41	0.52	0.02	0.25	0.11	0.21	0.01
Bihar[d]	0.88	0.26	0.50	0.38	0.27	0.33	0.37	0.62	0.10	0.34	0.20	0.33	0.02
Gujarat	0.17	0.03	0.20	0.07	0.12	0.15	0.27	0.62	0.01	0.36	0.12	0.29	0.02
Jammu & Kashmir	0.17	0.01	0.15	0.19	0.14	0.27	0.50	0.30	0.00	0.20	0.08	0.17	0.02
Karnataka	0.60	0.04	0.28	0.19	0.17	0.21	0.47	0.59	0.03	0.28	0.13	0.30	0.02
Kerala	0.75	0.06	0.58	0.08	0.02	0.10	0.45	0.47	0.01	0.15	0.08	0.14	0.00
Madhya Pradesh[d]	0.55	0.04	0.27	0.23	0.19	0.16	0.21	0.60	0.03	0.28	0.22	0.34	0.02
Maharashtra	0.20	0.03	0.14	0.12	0.08	0.14	0.43	0.56	0.01	0.29	0.11	0.33	0.01
Orissa	0.70	0.16	0.52	0.35	0.41	0.18	0.20	0.71	0.13	0.28	0.10	0.29	0.02
Punjab[d]	0.28	0.01	0.13	0.08	0.09	0.18	0.42	0.55	0.00	0.27	0.11	0.24	0.02
Rajasthan	0.19	0.04	0.30	0.12	0.15	0.19	0.29	0.63	0.01	0.24	0.19	0.39	0.03
Tamil Nadu	0.56	0.05	0.20	0.15	0.13	0.17	0.39	0.54	0.02	0.20	0.17	0.26	0.02
Uttar Pradesh[d]	0.57	0.11	0.36	0.20	0.13	0.27	0.23	0.58	0.03	0.37	0.06	0.29	0.02
West Bengal	0.59	0.06	0.28	0.10	0.04	0.21	0.48	0.51	0.01	0.20	0.11	0.29	0.01
C.V.[e]	**0.50**	**0.98**	**0.49**	**0.75**	**0.74**	**0.30**	**0.28**	**0.18**	**1.25**	**0.23**	**0.40**	**0.24**	**0.44**
All India	**0.45**	**0.06**	**0.25**	**0.19**	**0.11**	**0.19**	**0.37**	**0.58**	**0.02**	**0.28**	**0.12**	**0.28**	**0.02**
SC/ST	**0.56**	**0.10**	**0.38**	**0.31**	**0.21**	**0.28**	**0.45**	**0.65**	**0.05**	**0.35**	**0.14**	**0.31**	**0.03**
Non SC/ST	**0.42**	**0.05**	**0.22**	**0.16**	**0.09**	**0.17**	**0.36**	**0.56**	**0.02**	**0.25**	**0.12**	**0.27**	**0.01**

a. If the education of the head of the household is below primary, he is considered to be deprived.

b. For share of stunted, wasted and anaemic children in a household, the threshold for being deprived is 60 percent or more of the total children in the household. It has to be noted that for calculating 'share of anaemic children', only children suffering from severe anaemia are considered to be deprived.

c. If the BMI of the mother is less than 18.5 and more than 30, she is considered to be deprived.

d. Assam includes Manipur, Meghalaya and Tripura; Punjab includes Haryana, Himachal Pradesh and Delhi; Uttar Pradesh, Madhya Pradesh and Bihar include Uttaranchal, Chhattisgarh and Jharkhand since their inception (here only for NFHS3).

e. Coefficient of Variation

Table 9: Percentage Contribution Based on Head Count Rates for 61st Round NSS

States	Percentage Contribution of Deprivation Indicator in Total Deprivation↓									
	Rural Areas					Urban Areas				
	Clean Fuel for Cooking	Electricity for Lighting	Education of Head of Household Head[a]	Food Expenditure[b]	Clothing Expenditure[b,c]	Clean Fuel for Cooking	Electricity for Lighting	Education of Head of Household Head[a]	Food Expenditure[b]	Clothing Expenditure[b,c]
Andhra Pradesh	45.59	8.46	36.11	2.01	7.83	35.01	6.49	37.43	4.23	16.84
Assam[d]	49.35	22.71	21.19	0.79	5.96	45.13	10.8	24.43	0.68	18.93
Bihar[d]	38.15	34.73	23.11	0.63	3.39	40.31	21.8	24.20	2.80	10.87
Gujarat	50.90	11.08	30.13	2.42	5.47	32.36	8.75	36.36	5.05	17.47
Jammu & Kashmir	56.56	1.58	37.08	0.55	4.23	33.92	1.09	47.89	2.54	14.56
Karnataka	54.66	7.01	32.98	1.06	4.28	42.38	6.61	31.81	5.34	13.88
Kerala	54.67	12.50	19.04	4.42	9.37	52.39	8.13	20.33	7.58	11.57
Madhya Pradesh[d]	49.66	15.04	27.92	1.81	5.58	47.22	6.20	31.15	4.07	11.36
Maharashtra	51.51	13.38	26.78	2.86	5.48	32.87	7.35	29.45	13.09	17.25
Orissa	39.90	27.18	26.03	1.76	5.12	42.16	17.1	27.02	3.18	10.46
Punjab[d]	54.18	3.46	33.69	2.54	6.14	27.09	4.16	40.08	8.13	20.54
Rajasthan	43.87	23.07	29.06	1.28	2.73	45.96	9.00	35.11	3.11	6.82
Tamil Nadu	52.48	8.66	30.28	2.36	6.23	38.03	7.66	32.14	6.84	15.34
Uttar Pradesh[d]	41.28	29.70	23.52	1.36	4.14	37.56	17.1	30.28	4.24	10.81
West Bengal	39.82	29.93	24.14	1.13	4.98	41.27	15.2	27.33	3.69	12.43
C.V.[e]	**0.14**	**0.66**	**0.18**	**0.59**	**0.30**	**0.18**	**0.61**	**0.22**	**0.59**	**0.26**
All India	**46.30**	**20.07**	**26.72**	**1.63**	**5.28**	**39.20**	**10.4**	**30.57**	**5.41**	**14.42**
SC/ST	**42.17**	**21.82**	**27.40**	**2.30**	**6.31**	**37.71**	**13.0**	**30.15**	**5.91**	**13.22**
Non SC/ST	**48.59**	**19.16**	**26.39**	**1.22**	**4.64**	**39.86**	**9.45**	**30.82**	**5.14**	**14.74**

a. If the education of the head of the household is below primary, he is considered to be deprived.

b. For food, clothing and transport export expenditure, the threshold for being deprived is half of the median expenditure per capita on the respective category for that state.

c. For food expenditure, recall period is 30 days while for Clothing expenditure, it is 365 days.

d. Assam includes Manipur, Meghalaya and Tripura; Punjab includes Haryana, Himachal Pradesh and Delhi; Uttar Pradesh, Madhya Pradesh and Bihar include Uttaranchal, Chhattisgarh and Jharkhand since their inception (here only for 61st round).

e. Coefficient of Variation

Table 10: Percentage Contribution Based on Head Count Rates NFHS 3 (Rural Areas)

States	Percentage Contribution of Deprivation Indicator in Total Deprivation↓												
	Access to Source of Drinking Water on its Premises	Access to Electricity for Lighting	Access to Clean Fuel for Cooking	Access to 'Pucca' House	Access to Toilet Facility	Education of the Head of the Household Head[a]	Access to Bicycle	Access to Radio	Belongs to Poorest Wealth Quintile	Share of Stunted Children[b]	Share of Wasted Children[b]	BMI of the Mother[c]	Share of Anaemic Children[b]
Andhra Pradesh	13.20	2.39	13.53	8.94	11.97	8.70	8.98	13.92	2.56	6.19	1.51	7.74	0.39
Assam[d]	16.88	7.67	15.00	15.62	3.40	5.83	8.70	10.95	2.60	5.93	2.26	5.04	0.12
Bihar[d]	12.98	10.53	12.63	11.36	10.88	7.76	6.08	9.19	4.57	5.65	2.30	5.93	0.14
Gujarat	9.71	3.03	14.20	9.21	12.73	6.65	8.97	13.93	2.13	7.62	2.50	8.85	0.47
Jammu & Kashmir	13.94	1.90	15.83	12.02	9.78	8.82	15.93	6.95	0.84	5.17	2.09	6.42	0.29
Karnataka	13.53	2.50	14.35	10.00	12.54	8.03	9.83	11.37	2.75	5.95	2.20	6.67	0.29
Kerala	24.74	2.88	20.91	4.48	1.30	3.11	16.67	12.81	0.45	4.45	3.38	4.73	0.11
Madhya Pradesh[d]	12.88	4.86	12.95	12.10	12.29	6.53	5.81	10.95	6.97	5.55	2.68	6.14	0.28
Maharashtra	10.44	4.87	13.42	11.43	13.16	5.56	9.18	12.47	3.56	6.27	1.79	7.59	0.26
Orissa	13.76	8.61	13.33	10.18	12.24	5.99	5.04	11.06	6.68	4.91	1.82	6.21	0.16
Punjab[d]	13.56	1.19	16.84	10.12	11.43	8.18	9.47	13.38	0.60	6.05	2.09	6.72	0.37
Rajasthan	12.20	6.51	13.65	9.21	12.94	7.81	8.50	11.28	4.92	5.07	2.02	5.23	0.66
Tamil Nadu	15.25	2.83	14.91	7.24	14.91	6.71	8.96	11.94	3.35	4.01	3.13	6.36	0.39
Uttar Pradesh[d]	13.92	10.09	13.54	12.22	11.83	7.07	3.44	9.71	5.04	6.46	1.14	5.35	0.21
West Bengal	14.57	9.57	14.31	11.95	8.09	6.55	5.18	10.31	5.35	4.94	1.97	7.08	0.14
C.V.[e]	**0.24**	**0.62**	**0.14**	**0.25**	**0.35**	**0.21**	**0.42**	**0.17**	**0.59**	**0.16**	**0.26**	**0.17**	**0.53**
All India	**13.96**	**5.87**	**14.30**	**11.11**	**10.64**	**6.90**	**7.63**	**11.23**	**3.89**	**5.87**	**2.10**	**6.24**	**0.27**
SC/ST	**12.87**	**6.34**	**13.35**	**11.29**	**10.79**	**7.40**	**7.75**	**10.95**	**5.11**	**5.83**	**2.14**	**5.91**	**0.29**
Non SC/ST	**14.63**	**5.58**	**14.88**	**11.02**	**10.55**	**6.60**	**7.56**	**11.41**	**3.15**	**5.87**	**2.07**	**6.43**	**0.25**

a. If the education of the head of the household is below primary, he is considered to be deprived.

b. For share of stunted, wasted and anaemic children in a household, the threshold for being deprived is 60 percent or more of the total children in the household. It has to be noted that for calculating 'share of anaemic children', only children suffering from severe anaemia are considered to be deprived.

c. If the BMI of the mother is less than 18.5 and more than 30, she is considered to be deprived.

d. Assam includes Manipur, Meghalaya and Tripura; Punjab includes Haryana, Himachal Pradesh and Delhi; Uttar Pradesh, Madhya Pradesh and Bihar include Uttaranchal, Chhattisgarh and Jharkhand since their inception (here only for NFHS3).

e. Coefficient of Variation

Table 11: Percentage Contribution Based on Head Count Rates NFHS 3 (Urban Areas)

States	Percentage Contribution of Deprivation Indicator in Total Deprivation↓												
	Access to Source of Drinking Water on its Premises	Access to Electricity for Lighting	Access to Clean Fuel for Cooking	Access to 'Pucca' House	Access to Toilet Facility	Education of the Head of the Household Head[a]	Access to Bicycle	Access to Radio	Belongs to Poorest Wealth Quintile	Share of Stunted Children[b]	Share of Wasted Children[b]	BMI of the Mother[c]	Share of Anaemic Children[b]
Andhra Pradesh	9.89	1.25	6.05	4.01	3.77	9.52	15.21	27.79	0.80	8.96	2.52	9.37	0.86
Assam[d]	19.68	3.07	10.25	17.81	0.35	4.58	11.85	15.09	0.57	7.37	3.10	6.10	0.20
Bihar[d]	19.29	5.65	11.03	8.21	5.91	7.14	8.10	13.50	2.07	7.35	4.41	7.11	0.24
Gujarat	7.06	1.02	8.12	3.03	4.84	6.11	11.16	25.69	0.34	14.88	4.78	11.88	1.08
Jammu & Kashmir	7.57	0.27	6.98	8.45	6.37	12.18	22.88	13.90	0.16	9.15	3.61	7.81	0.67
Karnataka	18.17	1.05	8.45	5.75	5.18	6.36	14.20	17.81	0.90	8.36	4.02	9.19	0.55
Kerala	26.09	1.91	20.15	2.73	0.55	3.55	15.67	16.21	0.17	5.06	2.84	4.92	0.15
Madhya Pradesh[d]	17.67	1.20	8.66	7.33	5.92	5.25	6.62	19.14	1.10	8.88	6.87	10.70	0.67
Maharashtra	8.18	1.31	5.87	4.75	3.39	5.47	17.40	22.85	0.32	11.95	4.40	13.49	0.63
Orissa	17.29	3.97	12.88	8.78	10.15	4.48	4.84	17.71	3.21	6.89	2.41	7.10	0.29
Punjab[d]	11.74	0.50	5.62	3.24	3.68	7.69	17.57	23.06	0.12	11.22	4.57	10.24	0.75
Rajasthan	6.84	1.54	10.79	4.24	5.24	6.93	10.48	22.36	0.41	8.73	6.91	13.87	1.67
Tamil Nadu	19.51	1.66	7.02	5.22	4.38	6.08	13.55	18.78	0.83	7.10	5.98	9.13	0.76
Uttar Pradesh[d]	17.85	3.30	11.15	6.32	4.15	8.53	7.12	18.11	0.79	11.41	1.83	8.98	0.47
West Bengal	20.44	2.09	9.48	3.37	1.43	7.36	16.52	17.54	0.44	7.04	3.90	10.05	0.33
C.V.[e]	**0.40**	**0.73**	**0.39**	**0.61**	**0.57**	**0.32**	**0.38**	**0.22**	**1.01**	**0.28**	**0.37**	**0.27**	**0.64**
All India	**15.35**	**1.96**	**8.66**	**6.55**	**3.88**	**6.64**	**12.76**	**19.74**	**0.75**	**9.40**	**4.14**	**9.61**	**0.57**
SC/ST	**14.79**	**2.74**	**10.05**	**8.11**	**5.42**	**7.24**	**11.70**	**17.16**	**1.30**	**9.12**	**3.66**	**8.18**	**0.53**
Non SC/ST	**15.58**	**1.68**	**8.17**	**6.01**	**3.33**	**6.44**	**13.16**	**20.70**	**0.55**	**9.44**	**4.30**	**10.11**	**0.54**

a. If the education of the head of the household is below primary, he is considered to be deprived.

b. For share of stunted, wasted and anaemic children in a household, the threshold for being deprived is 60 percent or more of the total children in the household. It has to be noted that for calculating 'share of anaemic children', only children suffering from severe anaemia are considered to be deprived.

c. If the BMI of the mother is less than 18.5 and more than 30, she is considered to be deprived.

d. Assam includes Manipur, Meghalaya and Tripura; Punjab includes Haryana, Himachal Pradesh and Delhi; Uttar Pradesh, Madhya Pradesh and Bihar include Uttaranchal, Chhattisgarh and Jharkhand since their inception (here only for NFHS3).

e. Coefficient of Variation

Table 12: Measures of Multidimensional Deprivation for Rural Areas (NSS)

States	50th Round NSS					55th Round NSS					61st Round NSS				
	Population Share	Measures of Multidimensional Deprivation at[d]				Population Share	Measures of Multidimensional Deprivation at[d]				Population Share	Measures of Multidimensional Deprivation at[d]			
		π_0	π_1	π_2	π_3		π_0	π_1	π_2	π_3		π_0	π_1	π_2	π_3
Andhra Pradesh	0.06	0.95	0.47	0.26	0.17	0.07	0.92	0.42	0.22	0.12	0.06	0.85	0.34	0.16	0.09
		(6.2)	(6.3)	(6.4)	(6.6)		(6.4)	(6.4)	(6.2)	(6.1)		(5.7)	(5.6)	(5.5)	(5.4)
Assam[a]	0.10	0.98	0.47	0.26	0.16	0.10	0.95	0.46	0.25	0.15	0.11	0.91	0.36	0.17	0.09
		(10.3)	(10.2)	(10.1)	(10.0)		(9.6)	(10.1)	(10.4)	(10.7)		(11.5)	(11.0)	(10.4)	(9.9)
Bihar[a]	0.11	1.00	0.55	0.32	0.20	0.12	0.99	0.54	0.31	0.19	0.10	0.98	0.47	0.25	0.15
		(11.2)	(12.6)	(13.4)	(13.8)		(12.3)	(14.4)	(15.8)	(16.6)		(10.8)	(12.6)	(13.7)	(14.2)
Gujarat	0.04	0.92	0.40	0.21	0.12	0.04	0.88	0.35	0.16	0.09	0.03	0.81	0.29	0.13	0.07
		(3.4)	(3.0)	(2.8)	(2.6)		(3.5)	(3.0)	(2.7)	(2.5)		(2.8)	(2.4)	(2.2)	(2.1)
Jammu & Kashmir	0.01	0.93	0.37	0.17	0.09	0.01	0.78	0.27	0.11	0.05	0.03	0.87	0.29	0.11	0.05
		(1.3)	(1.1)	(0.9)	(0.7)		(0.7)	(0.6)	(0.4)	(0.3)		(2.8)	(2.3)	(1.8)	(1.4)
Karnataka	0.04	0.96	0.45	0.24	0.15	0.04	0.92	0.38	0.18	0.10	0.04	0.91	0.33	0.14	0.07
		(4.2)	(4.0)	(3.9)	(3.9)		(4.0)	(3.6)	(3.3)	(3.1)		(3.8)	(3.3)	(2.8)	(2.4)
Kerala	0.04	0.93	0.39	0.20	0.12	0.04	0.86	0.34	0.17	0.09	0.04	0.82	0.29	0.13	0.07
		(3.4)	(2.9)	(2.7)	(2.7)		(3.3)	(2.8)	(2.6)	(2.6)		(3.5)	(3.0)	(2.7)	(2.6)
Madhya Pradesh[a]	0.09	0.99	0.49	0.27	0.17	0.08	0.97	0.42	0.21	0.12	0.08	0.95	0.38	0.18	0.10
		(8.8)	(8.9)	(8.9)	(8.8)		(8.7)	(8.2)	(7.7)	(7.4)		(8.9)	(8.7)	(8.5)	(8.5)
Maharashtra	0.06	0.89	0.38	0.19	0.11	0.06	0.84	0.32	0.15	0.08	0.06	0.80	0.28	0.13	0.07
		(6.1)	(5.3)	(4.9)	(4.7)		(5.3)	(4.5)	(4.0)	(3.7)		(5.7)	(4.9)	(4.5)	(4.4)
Orissa	0.05	0.99	0.54	0.32	0.21	0.05	0.98	0.52	0.31	0.20	0.05	0.95	0.44	0.24	0.15
		(5.1)	(5.6)	(6.1)	(6.4)		(5.0)	(5.8)	(6.5)	(7.1)		(5.3)	(6.0)	(6.7)	(7.3)
Punjab[a]	0.08	0.92	0.37	0.18	0.10	0.08	0.83	0.30	0.12	0.06	0.09	0.81	0.27	0.11	0.05
		(7.7)	(6.4)	(5.4)	(4.8)		(7.0)	(5.4)	(4.3)	(3.6)		(7.8)	(6.3)	(5.1)	(4.3)
Rajasthan	0.05	0.97	0.48	0.27	0.17	0.06	0.95	0.44	0.23	0.13	0.05	0.95	0.43	0.22	0.13
		(5.0)	(5.2)	(5.2)	(5.2)		(5.6)	(5.6)	(5.6)	(5.5)		(5.7)	(6.2)	(6.5)	(6.6)
Tamil Nadu	0.05	0.94	0.43	0.23	0.14	0.05	0.88	0.37	0.18	0.10	0.04	0.82	0.30	0.13	0.07
		(4.7)	(4.4)	(4.3)	(4.3)		(4.7)	(4.3)	(4.0)	(3.9)		(3.9)	(3.5)	(3.1)	(2.9)
Uttar Pradesh[a]	0.15	0.98	0.52	0.31	0.19	0.16	0.96	0.47	0.26	0.15	0.15	0.94	0.44	0.23	0.14
		(15.7)	(17.2)	(18.1)	(18.8)		(16.9)	(18.0)	(18.7)	(19.0)		(15.3)	(17.4)	(19.0)	(20.1)
West Bengal	0.07	0.96	0.47	0.26	0.16	0.07	0.96	0.47	0.26	0.16	0.07	0.92	0.40	0.21	0.12
		(6.9)	(7.0)	(6.9)	(6.8)		(6.9)	(7.4)	(7.7)	(7.9)		(6.6)	(7.1)	(7.5)	(7.8)
C.V.[c]	**0.53**	**0.03**	**0.13**	**0.20**	**0.25**	**0.56**	**0.07**	**0.20**	**0.29**	**0.36**	**0.50**	**0.07**	**0.19**	**0.30**	**0.37**
		(0.55)	**(0.62)**	**(0.67)**	**(0.70)**		**(0.60)**	**(0.69)**	**(0.75)**	**(0.79)**		**(0.54)**	**(0.63)**	**(0.71)**	**(0.76)**
SC/ST	**0.30**	**0.99**	**0.54**	**0.33**	**0.21**	**0.29**	**0.98**	**0.50**	**0.28**	**0.17**	**0.30**	**0.95**	**0.43**	**0.23**	**0.14**
		(30.6)	**(34.4)**	**(37.3)**	**(39.6)**		**(30.9)**	**(34.2)**	**(36.9)**	**(39.2)**		**(32.0)**	**(35.3)**	**(38.2)**	**(40.9)**
Non SC/ST	**0.70**	**0.95**	**0.43**	**0.23**	**0.13**	**0.71**	**0.91**	**0.39**	**0.20**	**0.11**	**0.70**	**0.87**	**0.34**	**0.16**	**0.08**
		(69.4)	**(65.6)**	**(62.7)**	**(60.4)**		**(69.1)**	**(65.8)**	**(63.1)**	**(60.8)**		**(68.0)**	**(64.7)**	**(61.8)**	**(59.2)**
All India	**1.00**	**0.96**	**0.47**	**0.26**	**0.16**	**1.00**	**0.93**	**0.43**	**0.23**	**0.13**	**1.00**	**0.90**	**0.37**	**0.18**	**0.10**

a. Assam includes Manipur, Meghalaya and Tripura; Punjab includes Haryana, Himachal Pradesh and Delhi; Uttar Pradesh, Madhya Pradesh and Bihar include Uttaranchal, Chhattisgarh and Jharkhand since their inception (here only for 61st round).

b. The dimensions of deprivation included here are 5. The household is defined as deprived if it does not have access to clean fuel for cooking (mainly LPG, kerosene and electricity); access to electricity for lighting; education of the household head in below primary; monthly per capita food expenditure is less than the half of the median food expenditure in that particular state and yearly per capita cloth expenditure is less than half of the median cloth expenditure in that particular state.

c. Coefficient of Variation

d. Figures in parenthesis represent the percentage contribution of a state to all India deprivation exploiting the decomposable property of the multidimensional deprivation measure at various values of α.

Table 13: Measures of Multidimensional Deprivation for Urban Areas (NSS)

States	50th Round NSS					55th Round NSS					61st Round NSS				
	Population Share	Measures of Multidimensional[b] Deprivation at[d]				Population Share	Measures of Multidimensional[b] Deprivation at[d]				Population Share	Measures of Multidimensional[b] Deprivation at[d]			
		π_0	π_1	π_2	π_3		π_0	π_1	π_2	π_3		π_0	π_1	π_2	π_3
Andhra Pradesh	0.08	0.60	0.25	0.13	0.08	0.08	0.50	0.18	0.08	0.05	0.06	0.57	0.21	0.10	0.05
		(8.3)	(8.8)	(9.2)	(9.4)		(7.7)	(7.8)	(7.9)	(7.9)		(6.8)	(7.0)	(7.0)	(6.9)
Assam[a]	0.06	0.66	0.24	0.11	0.06	0.05	0.53	0.19	0.09	0.05	0.07	0.55	0.18	0.08	0.04
		(6.7)	(6.3)	(5.9)	(5.6)		(5.5)	(5.4)	(5.4)	(5.2)		(7.4)	(6.8)	(6.1)	(5.4)
Bihar[a]	0.05	0.76	0.32	0.17	0.10	0.06	0.68	0.29	0.15	0.09	0.07	0.66	0.28	0.14	0.09
		(7.0)	(7.6)	(8.0)	(8.2)		(7.5)	(8.8)	(10.0)	(10.6)		(8.3)	(9.6)	(11.0)	(12.2)
Gujarat	0.06	0.48	0.17	0.08	0.05	0.06	0.42	0.13	0.05	0.03	0.05	0.40	0.14	0.06	0.03
		(4.6)	(4.2)	(4.0)	(3.9)		(5.1)	(4.5)	(3.9)	(3.6)		(3.7)	(3.5)	(3.3)	(3.2)
Jammu & Kashmir	0.01	0.41	0.13	0.05	0.02	0.01	0.39	0.11	0.04	0.02	0.02	0.44	0.13	0.04	0.02
		(0.9)	(0.7)	(0.5)	(0.4)		(1.0)	(0.8)	(0.6)	(0.5)		(2.0)	(1.5)	(1.2)	(0.9)
Karnataka	0.06	0.58	0.23	0.12	0.08	0.06	0.50	0.18	0.08	0.05	0.05	0.52	0.18	0.08	0.04
		(5.8)	(6.0)	(6.2)	(6.4)		(5.4)	(5.4)	(5.4)	(5.5)		(5.0)	(4.8)	(4.6)	(4.5)
Kerala	0.04	0.77	0.30	0.15	0.09	0.04	0.65	0.23	0.10	0.05	0.05	0.64	0.22	0.10	0.06
		(5.4)	(5.5)	(5.4)	(5.3)		(5.6)	(5.4)	(5.2)	(5.1)		(5.6)	(5.5)	(5.3)	(5.3)
Madhya Pradesh[a]	0.08	0.63	0.23	0.11	0.06	0.08	0.55	0.19	0.08	0.04	0.08	0.60	0.21	0.09	0.05
		(8.7)	(8.3)	(7.8)	(7.4)		(8.4)	(8.1)	(7.6)	(7.1)		(8.6)	(8.4)	(8.1)	(7.7)
Maharashtra	0.12	0.44	0.16	0.08	0.05	0.12	0.40	0.13	0.05	0.03	0.12	0.39	0.13	0.06	0.03
		(9.3)	(8.5)	(8.2)	(8.4)		(9.2)	(8.0)	(7.2)	(6.9)		(9.0)	(8.5)	(8.3)	(8.5)
Orissa	0.02	0.70	0.30	0.17	0.11	0.02	0.64	0.28	0.15	0.10	0.03	0.65	0.27	0.14	0.09
		(2.7)	(3.1)	(3.4)	(3.8)		(2.8)	(3.3)	(3.9)	(4.5)		(3.6)	(4.1)	(4.8)	(5.3)
Punjab[a]	0.09	0.47	0.16	0.07	0.04	0.10	0.42	0.13	0.05	0.02	0.11	0.39	0.12	0.05	0.03
		(7.0)	(6.1)	(5.3)	(4.8)		(8.1)	(6.9)	(5.8)	(5.0)		(7.9)	(7.0)	(6.2)	(5.7)
Rajasthan	0.04	0.59	0.23	0.11	0.06	0.05	0.50	0.17	0.07	0.04	0.04	0.56	0.19	0.08	0.04
		(4.3)	(4.2)	(4.1)	(4.0)		(4.7)	(4.5)	(4.1)	(3.7)		(4.6)	(4.4)	(4.0)	(3.6)
Tamil Nadu	0.08	0.64	0.25	0.13	0.08	0.08	0.50	0.18	0.08	0.04	0.08	0.50	0.17	0.07	0.04
		(9.1)	(9.1)	(9.2)	(9.2)		(7.7)	(7.5)	(7.4)	(7.4)		(7.9)	(7.3)	(6.7)	(6.3)
Uttar Pradesh[a]	0.12	0.63	0.27	0.14	0.09	0.12	0.59	0.24	0.12	0.07	0.12	0.59	0.24	0.12	0.07
		(12.6)	(13.9)	(14.8)	(15.3)		(13.9)	(15.5)	(16.8)	(17.5)		(12.9)	(14.5)	(15.9)	(17.0)
West Bengal	0.07	0.64	0.26	0.13	0.08	0.07	0.58	0.22	0.11	0.07	0.06	0.56	0.21	0.10	0.06
		(7.5)	(7.7)	(8.0)	(8.2)		(7.6)	(8.2)	(8.8)	(9.5)		(6.8)	(7.1)	(7.5)	(7.9)
C.V.[c]	**0.47**	**0.18**	**0.25**	**0.31**	**0.36**	**0.46**	**0.18**	**0.28**	**0.39**	**0.47**	**0.44**	**0.17**	**0.26**	**0.35**	**0.44**
		(0.43)	**(0.46)**	**(0.50)**	**(0.52)**		**(0.45)**	**(0.49)**	**(0.55)**	**(0.59)**		**(0.41)**	**(0.46)**	**(0.52)**	**(0.58)**
SC/ST	**0.16**	**0.80**	**0.36**	**0.21**	**0.14**	**0.17**	**0.72**	**0.30**	**0.16**	**0.10**	**0.19**	**0.69**	**0.28**	**0.14**	**0.09**
		(21.3)	**(25.0)**	**(28.6)**	**(31.6)**		**(24.0)**	**(27.9)**	**(31.8)**	**(35.0)**		**(25.8)**	**(29.0)**	**(32.3)**	**(35.1)**
Non SC/ST	**0.84**	**0.55**	**0.20**	**0.10**	**0.06**	**0.83**	**0.47**	**0.16**	**0.07**	**0.04**	**0.81**	**0.48**	**0.16**	**0.07**	**0.04**
		(78.7)	**(75.0)**	**(71.4)**	**(68.4)**		**(76.1)**	**(72.1)**	**(68.2)**	**(65.0)**		**(74.3)**	**(71.0)**	**(67.7)**	**(64.9)**
All India	**1.00**	**0.59**	**0.23**	**0.12**	**0.07**	**1.00**	**0.52**	**0.19**	**0.09**	**0.05**	**1.00**	**0.52**	**0.19**	**0.09**	**0.05**

a. Assam includes Manipur, Meghalaya and Tripura; Punjab includes Haryana, Himachal Pradesh and Delhi; Uttar Pradesh, Madhya Pradesh and Bihar include Uttaranchal, Chhattisgarh and Jharkhand since their inception (here only for 61st round).

b. The dimensions of deprivation included here are 5. The household is defined as deprived if it does not have access to clean fuel for cooking (mainly LPG, kerosene and electricity); access to electricity for lighting; education of the household head in below primary; monthly per capita food expenditure is less than the half of the median food expenditure in that particular state and yearly per capita cloth expenditure is less than half of the median cloth expenditure in that particular state.

c. Coefficient of Variation

d. Figures in parenthesis represent the percentage contribution of a state to all India deprivation exploiting the decomposable property of the multidimensional deprivation measure at various values of α.

Table 14: Measures of Multidimensional Deprivation for Rural Areas (NFHS)

States	NFHS 1					NFHS 2					NFHS 3				
	Population Share	Measures of Multidimensional[b] Deprivation at[d]				Population Share	Measures of Multidimensional[b] Deprivation at[d]				Population Share	Measures of Multidimensional[b] Deprivation at[d]			
		π_0	π_1	π_2	π_3		π_0	π_1	π_2	π_3		π_0	π_1	π_2	π_3
Andhra Pradesh	0.05	1.00	0.74	0.58	0.48	0.04	1.00	0.70	0.53	0.42	0.04	1.00	0.66	0.47	0.35
		(4.9)	(5.2)	(5.5)	(5.7)		(4.2)	(4.4)	(4.5)	(4.6)		(4.1)	(4.2)	(4.3)	(4.3)
Assam[a]	0.08	1.00	0.67	0.49	0.37	0.10	1.00	0.65	0.46	0.35	0.13	1.00	0.60	0.39	0.28
		(8.1)	(7.9)	(7.6)	(7.4)		(9.6)	(9.3)	(9.0)	(8.6)		(13.3)	(12.4)	(11.6)	(10.9)
Bihar[a]	0.07	1.00	0.76	0.60	0.50	0.11	1.00	0.75	0.60	0.51	0.04	1.00	0.71	0.54	0.43
		(7.3)	(8.0)	(8.5)	(9.0)		(10.9)	(12.1)	(13.3)	(14.3)		(4.2)	(4.6)	(5.0)	(5.3)
Gujarat	0.04	1.00	0.63	0.45	0.34	0.04	1.00	0.63	0.44	0.33	0.04	0.99	0.58	0.38	0.27
		(4.3)	(3.9)	(3.7)	(3.6)		(3.7)	(3.5)	(3.3)	(3.2)		(3.8)	(3.4)	(3.2)	(3.0)
Jammu & Kashmir	0.04	1.00	0.61	0.42	0.31	0.04	1.00	0.58	0.37	0.25	0.04	1.00	0.56	0.34	0.23
		(3.5)	(3.1)	(2.8)	(2.6)		(4.0)	(3.5)	(3.0)	(2.7)		(4.0)	(3.5)	(3.0)	(2.7)
Karnataka	0.05	1.00	0.70	0.52	0.41	0.05	1.00	0.67	0.49	0.38	0.07	1.00	0.66	0.47	0.36
		(5.2)	(5.2)	(5.2)	(5.2)		(4.7)	(4.7)	(4.6)	(4.6)		(6.5)	(6.8)	(6.9)	(6.9)
Kerala	0.05	1.00	0.54	0.33	0.22	0.03	1.00	0.53	0.31	0.20	0.04	1.00	0.50	0.27	0.16
		(5.1)	(4.0)	(3.3)	(2.8)		(3.2)	(2.5)	(2.0)	(1.6)		(3.6)	(2.8)	(2.2)	(1.7)
Madhya Pradesh[a]	0.08	1.00	0.77	0.62	0.52	0.09	1.00	0.72	0.55	0.44	0.10	1.00	0.72	0.55	0.44
		(8.0)	(9.0)	(9.7)	(10.3)		(8.9)	(9.4)	(9.8)	(10.1)		(10.1)	(11.3)	(12.3)	(13.1)
Maharashtra	0.04	1.00	0.67	0.50	0.39	0.04	1.00	0.67	0.49	0.38	0.05	0.99	0.64	0.46	0.35
		(4.0)	(3.9)	(3.9)	(3.8)		(3.5)	(3.5)	(3.5)	(3.5)		(4.8)	(4.9)	(5.0)	(5.0)
Orissa	0.06	1.00	0.76	0.60	0.50	0.06	1.00	0.75	0.61	0.51	0.05	1.00	0.72	0.56	0.45
		(5.6)	(6.1)	(6.5)	(6.8)		(6.0)	(6.7)	(7.4)	(8.0)		(5.2)	(5.8)	(6.4)	(6.9)
Punjab[a]	0.11	0.99	0.58	0.38	0.26	0.11	0.99	0.56	0.35	0.23	0.12	1.00	0.55	0.34	0.22
		(11.4)	(9.7)	(8.4)	(7.3)		(10.8)	(9.1)	(7.7)	(6.6)		(12.0)	(10.4)	(9.0)	(7.9)
Rajasthan	0.08	1.00	0.73	0.58	0.48	0.09	1.00	0.69	0.52	0.41	0.05	1.00	0.69	0.51	0.41
		(7.8)	(8.3)	(8.8)	(9.2)		(9.3)	(9.6)	(9.8)	(9.9)		(4.9)	(5.2)	(5.6)	(5.9)
Tamil Nadu	0.04	1.00	0.71	0.54	0.42	0.04	1.00	0.66	0.47	0.36	0.04	1.00	0.63	0.44	0.33
		(4.0)	(4.1)	(4.2)	(4.2)		(3.8)	(3.7)	(3.6)	(3.5)		(4.4)	(4.4)	(4.4)	(4.3)
Uttar Pradesh[a]	0.15	1.00	0.70	0.53	0.42	0.14	1.00	0.71	0.53	0.42	0.14	1.00	0.69	0.51	0.40
		(15.3)	(15.6)	(15.7)	(15.7)		(13.5)	(14.2)	(14.6)	(14.8)		(14.1)	(15.2)	(16.0)	(16.7)
West Bengal	0.06	1.00	0.75	0.60	0.50	0.04	1.00	0.71	0.55	0.44	0.05	1.00	0.67	0.49	0.38
		(5.6)	(6.1)	(6.5)	(6.9)		(3.8)	(4.0)	(4.2)	(4.4)		(5.2)	(5.4)	(5.7)	(5.8)
C.V.[c]	**0.48**	**0.00**	**0.10**	**0.17**	**0.23**	**0.52**	**0.00**	**0.10**	**0.18**	**0.25**	**0.56**	**0.00**	**0.11**	**0.19**	**0.26**
		(0.48)	**(0.48)**	**(0.50)**	**(0.52)**		**(0.52)**	**(0.55)**	**(0.58)**	**(0.62)**		**(0.56)**	**(0.56)**	**(0.58)**	**(0.61)**
SC/ST	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**0.32**	**1.00**	**0.74**	**0.58**	**0.48**	**0.33**	**1.00**	**0.70**	**0.52**	**0.41**
		(N.A.)	**(N.A.)**	**(N.A.)**	**(N.A.)**		**(31.5)**	**(34.7)**	**(37.2)**	**(39.3)**		**(32.8)**	**(35.7)**	**(38.0)**	**(39.9)**
Non SC/ST	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**0.69**	**1.00**	**0.64**	**0.45**	**0.34**	**0.67**	**1.00**	**0.61**	**0.41**	**0.30**
		(N.A.)	**(N.A.)**	**(N.A.)**	**(N.A.)**		**(68.5)**	**(65.1)**	**(62.4)**	**(60.3)**		**(67.2)**	**(64.2)**	**(61.9)**	**(60.0)**
All India	**1.00**	**1.00**	**0.69**	**0.52**	**0.41**	**1.00**	**1.00**	**0.67**	**0.49**	**0.38**	**1.00**	**1.00**	**0.64**	**0.45**	**0.34**

a. Assam includes Manipur, Meghalaya and Tripura; Punjab includes Haryana, Himachal Pradesh and Delhi; Uttar Pradesh, Madhya Pradesh and Bihar include Uttaranchal, Chhattisgarh and Jharkhand since their inception (here only for NFHS 3).

b. The dimensions of deprivation included here are 13. The household is defined as deprived if it does not have access to drinking water on its own premises; access to electricity for lighting ; access to clean fuel for cooking (mainly LPG, kerosene, electricity and biogas); access to 'pucca' house; access to any description of toilet including pit latrine; education of the household head is below primary; access to cycle as a basic minimum transport; access to radio as a basic source of entertainment; falling in the poorest wealth quintile; share of stunted children (in 0-3 years of age) in the household is 60% or more; share of wasted children (in 0-3 years of age) in the household is 60% or more; BMI of the mother in the household is less than 18.5 or above 30; and share of anaemic (suffering from severe anaemia only) children (in 0-3 years of age) in the household is 60% or more.

c. Coefficient of Variation

d. Figures in parenthesis represent the percentage contribution of a state to all India deprivation exploiting the decomposable property of the multidimensional deprivation measure at various values of α.

Table 15: Measures of Multidimensional Deprivation for Urban Areas (NFHS)

States	NFHS 1					NFHS 2					NFHS 3				
	Population Share	Measures of Multidimensional[b] Deprivation at[d]				Population Share	Measures of Multidimensional[b] Deprivation at[d]				Population Share	Measures of Multidimensional[b] Deprivation at[d]			
		π_0	π_1	π_2	π_3		π_0	π_1	π_2	π_3		π_0	π_1	π_2	π_3
Andhra Pradesh	0.04	1.00	0.43	0.24	0.16	0.03	0.98	0.43	0.23	0.14	0.09	0.99	0.42	0.21	0.11
		(4.2)	(4.5)	(4.9)	(5.2)		(3.4)	(3.7)	(4.1)	(4.6)		(9.2)	(9.1)	(9.0)	(8.9)
Assam[a]	0.08	0.99	0.44	0.23	0.14	0.07	1.00	0.45	0.24	0.14	0.09	0.99	0.47	0.25	0.14
		(8.1)	(9.0)	(9.2)	(9.1)		(6.6)	(7.4)	(7.9)	(8.2)		(9.1)	(10.0)	(10.6)	(11.0)
Bihar[a]	0.05	0.97	0.44	0.26	0.18	0.03	0.99	0.48	0.28	0.18	0.03	0.99	0.51	0.30	0.20
		(4.9)	(5.6)	(6.4)	(7.4)		(2.9)	(3.5)	(4.1)	(4.8)		(3.2)	(3.9)	(4.7)	(5.6)
Gujarat	0.05	0.97	0.37	0.19	0.12	0.06	0.98	0.38	0.18	0.10	0.03	0.98	0.36	0.16	0.08
		(5.1)	(4.9)	(4.9)	(4.9)		(5.6)	(5.4)	(5.3)	(5.2)		(3.1)	(2.7)	(2.4)	(2.2)
Jammu & Kashmir	0.04	0.95	0.31	0.13	0.07	0.03	0.97	0.36	0.15	0.07	0.02	0.97	0.39	0.18	0.09
		(3.7)	(3.0)	(2.5)	(2.1)		(3.4)	(3.0)	(2.7)	(2.3)		(2.1)	(2.0)	(1.8)	(1.7)
Karnataka	0.06	0.97	0.42	0.23	0.15	0.05	0.97	0.40	0.20	0.11	0.05	0.99	0.46	0.24	0.14
		(5.6)	(6.0)	(6.4)	(6.7)		(5.3)	(5.3)	(5.4)	(5.6)		(4.7)	(5.1)	(5.4)	(5.8)
Kerala	0.05	0.99	0.45	0.24	0.15	0.03	0.99	0.44	0.22	0.12	0.02	0.98	0.44	0.22	0.12
		(4.5)	(5.1)	(5.3)	(5.3)		(3.0)	(3.2)	(3.2)	(3.1)		(2.3)	(2.4)	(2.4)	(2.4)
Madhya Pradesh[a]	0.06	1.00	0.43	0.23	0.14	0.07	0.98	0.45	0.25	0.16	0.09	0.98	0.42	0.21	0.12
		(6.4)	(6.8)	(7.0)	(7.2)		(7.0)	(7.8)	(9.0)	(10.1)		(9.1)	(9.0)	(9.0)	(9.2)
Maharashtra	0.07	0.97	0.36	0.17	0.09	0.13	0.99	0.39	0.17	0.09	0.14	0.98	0.39	0.18	0.09
		(6.7)	(6.3)	(5.6)	(5.1)		(12.6)	(12.2)	(11.3)	(10.1)		(13.8)	(12.8)	(11.7)	(10.5)
Orissa	0.05	0.98	0.49	0.30	0.21	0.03	0.99	0.52	0.33	0.24	0.03	0.99	0.50	0.30	0.21
		(4.8)	(6.0)	(7.2)	(8.2)		(3.3)	(4.2)	(5.5)	(7.1)		(2.7)	(3.2)	(3.9)	(4.8)
Punjab[a]	0.24	0.95	0.31	0.13	0.07	0.19	0.97	0.33	0.13	0.06	0.13	0.98	0.39	0.18	0.09
		(23.1)	(18.8)	(15.3)	(12.7)		(18.9)	(15.7)	(12.7)	(10.2)		(13.2)	(12.3)	(11.2)	(10.1)
Rajasthan	0.04	0.97	0.39	0.21	0.13	0.06	0.98	0.39	0.19	0.10	0.03	0.98	0.39	0.18	0.10
		(4.2)	(4.2)	(4.3)	(4.5)		(6.3)	(6.2)	(6.1)	(5.9)		(2.7)	(2.5)	(2.4)	(2.3)
Tamil Nadu	0.05	1.00	0.47	0.27	0.17	0.07	0.98	0.43	0.22	0.13	0.06	0.98	0.43	0.22	0.12
		(5.1)	(6.0)	(6.7)	(7.1)		(7.0)	(7.4)	(7.8)	(8.2)		(6.0)	(6.2)	(6.2)	(6.3)
Uttar Pradesh[a]	0.10	0.96	0.37	0.18	0.11	0.08	0.98	0.40	0.19	0.11	0.12	0.98	0.43	0.22	0.13
		(9.5)	(9.0)	(8.9)	(8.8)		(7.5)	(7.4)	(7.5)	(7.5)		(11.4)	(11.6)	(12.0)	(12.6)
West Bengal	0.04	1.00	0.49	0.28	0.19	0.07	0.99	0.42	0.20	0.11	0.07	0.99	0.44	0.22	0.12
		(4.0)	(4.9)	(5.6)	(6.0)		(7.3)	(7.6)	(7.6)	(7.4)		(7.2)	(7.4)	(7.3)	(7.2)
C.V.[c]	**0.74**	**0.02**	**0.14**	**0.24**	**0.31**	**0.64**	**0.01**	**0.12**	**0.24**	**0.36**	**0.61**	**0.01**	**0.10**	**0.20**	**0.31**
		(0.72)	**(0.56)**	**(0.44)**	**(0.37)**		**(0.64)**	**(0.52)**	**(0.43)**	**(0.37)**		**(0.61)**	**(0.58)**	**(0.56)**	**(0.54)**
SC/ST	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**0.19**	**0.99**	**0.49**	**0.28**	**0.18**	**0.21**	**0.99**	**0.48**	**0.27**	**0.16**
		(N.A.)	**(N.A.)**	**(N.A.)**	**(N.A.)**		**(18.7)**	**(22.7)**	**(26.9)**	**(30.9)**		**(20.8)**	**(23.4)**	**(26.2)**	**(29.1)**
Non SC/ST	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**0.82**	**0.98**	**0.38**	**0.17**	**0.09**	**0.79**	**0.98**	**0.41**	**0.20**	**0.10**
		(N.A.)	**(N.A.)**	**(N.A.)**	**(N.A.)**		**(81.3)**	**(77.4)**	**(73.3)**	**(69.3)**		**(79.2)**	**(76.7)**	**(73.9)**	**(71.0)**
All India	**1.00**	**0.97**	**0.39**	**0.20**	**0.12**	**1.00**	**0.98**	**0.40**	**0.19**	**0.11**	**1.00**	**0.98**	**0.42**	**0.21**	**0.12**

a. Assam includes Manipur, Meghalaya and Tripura; Punjab includes Haryana, Himachal Pradesh and Delhi; Uttar Pradesh, Madhya Pradesh and Bihar include Uttaranchal, Chhattisgarh and Jharkhand since their inception (here only for NFHS 3).

b. The dimensions of deprivation included here are 13. The household is defined as deprived if it does not have access to drinking water on its own premises; access to electricity for lighting ; access to clean fuel for cooking (mainly LPG, kerosene, electricity and biogas); access to 'pucca' house; access to any description of toilet including pit latrine; education of the household head is below primary; access to cycle as a basic minimum transport; access to radio as a basic source of entertainment; falling in the poorest wealth quintile; share of stunted children (in 0-3 years of age) in the household is 60% or more; share of wasted children (in 0-3 years of age) in the household is 60% or more; BMI of the mother in the household is less than 18.5 or above 30; and share of anaemic (suffering from severe anaemia only) children (in 0-3 years of age) in the household is 60% or more.

c. Coefficient of Variation

d. Figures in parenthesis represent the percentage contribution of a state to all India deprivation exploiting the decomposable property of the multidimensional deprivation measure at various values of α.

Table 16: Contribution of States[a] to All India Total Deprivation-NSS Sample

States	50th Round NSS					55th Round NSS					61st Round NSS				
	Population Share	Deprivation Contb. (at α = 0)	Deprivation Contb. (at α = 1)	Deprivation Contb. (at α = 2)	Deprivation Contb. (at α = 3)	Population Share	Deprivation Contb. (at α = 0)	Deprivation Contb. (at α = 1)	Deprivation Contb. (at α = 2)	Deprivation Contb. (at α = 3)	Population Share	Deprivation Contb. (at α = 0)	Deprivation Contb. (at α = 1)	Deprivation Contb. (at α = 2)	Deprivation Contb. (at α = 3)
Rural Areas															
Andhra Pradesh	0.06	0.99	0.99	1.01	1.04	0.07	0.99	0.97	0.95	0.94	0.06	0.95	0.93	0.91	0.89
Assam[b]	0.10	1.02	1.01	1.00	0.99	0.10	1.02	1.07	1.10	1.13	0.11	1.02	0.97	0.92	0.88
Bihar[b]	0.11	1.04	1.17	1.24	1.28	0.12	1.07	1.25	1.37	1.44	0.10	1.09	1.27	1.39	1.44
Gujarat	0.04	0.96	0.86	0.79	0.75	0.04	0.95	0.82	0.73	0.67	0.03	0.90	0.79	0.72	0.70
Jammu & Kashmir	0.01	0.97	0.78	0.64	0.54	0.01	0.84	0.63	0.49	0.39	0.03	0.97	0.78	0.61	0.47
Karnataka	0.04	1.00	0.96	0.94	0.93	0.04	0.99	0.89	0.82	0.77	0.04	1.02	0.88	0.76	0.66
Kerala	0.04	0.96	0.82	0.77	0.78	0.04	0.92	0.80	0.74	0.72	0.04	0.91	0.77	0.70	0.68
Madhya Pradesh[b]	0.09	1.03	1.04	1.04	1.04	0.08	1.05	0.99	0.93	0.89	0.08	1.06	1.03	1.01	1.01
Maharashtra	0.07	0.93	0.81	0.75	0.71	0.06	0.91	0.76	0.67	0.63	0.06	0.89	0.77	0.70	0.69
Orissa	0.05	1.03	1.14	1.23	1.29	0.05	1.05	1.21	1.36	1.49	0.05	1.05	1.19	1.33	1.46
Punjab[b]	0.08	0.96	0.79	0.67	0.59	0.08	0.89	0.69	0.55	0.46	0.09	0.90	0.72	0.59	0.50
Rajasthan	0.05	1.01	1.03	1.04	1.03	0.06	1.02	1.03	1.01	0.99	0.05	1.06	1.15	1.21	1.24
Tamil Nadu	0.05	0.98	0.92	0.90	0.89	0.05	0.95	0.86	0.81	0.79	0.04	0.92	0.81	0.72	0.67
Uttar Pradesh[b]	0.15	1.02	1.11	1.18	1.22	0.16	1.03	1.10	1.15	1.17	0.15	1.05	1.19	1.30	1.37
West Bengal	0.07	1.00	1.01	1.00	0.98	0.07	1.03	1.10	1.15	1.19	0.07	1.02	1.09	1.16	1.21
C.V.[c]	**0.53**	**0.03**	**0.13**	**0.20**	**0.25**	**0.56**	**0.07**	**0.20**	**0.29**	**0.36**	**0.50**	**0.07**	**0.19**	**0.30**	**0.37**
SC/ST	**0.30**	**1.03**	**1.15**	**1.25**	**1.33**	**0.29**	**1.05**	**1.16**	**1.25**	**1.33**	**0.30**	**1.06**	**1.17**	**1.27**	**1.36**
Non SC/ST	**0.70**	**0.99**	**0.94**	**0.89**	**0.86**	**0.71**	**0.98**	**0.93**	**0.89**	**0.86**	**0.70**	**0.97**	**0.93**	**0.88**	**0.85**
Urban Areas															
Andhra Pradesh	0.08	1.01	1.08	1.13	1.15	0.08	0.96	0.97	0.98	0.98	0.06	1.09	1.12	1.12	1.10
Assam[b]	0.06	1.12	1.05	0.99	0.93	0.05	1.03	1.03	1.01	0.99	0.07	1.05	0.98	0.88	0.78
Bihar[b]	0.05	1.29	1.40	1.48	1.51	0.06	1.32	1.56	1.75	1.87	0.07	1.27	1.47	1.69	1.87
Gujarat	0.06	0.81	0.75	0.71	0.69	0.06	0.81	0.71	0.63	0.57	0.05	0.77	0.72	0.69	0.67
Jammu & Kashmir	0.01	0.70	0.55	0.41	0.31	0.01	0.76	0.59	0.44	0.33	0.02	0.84	0.67	0.50	0.37
Karnataka	0.06	0.98	1.01	1.04	1.08	0.06	0.98	0.98	0.98	1.01	0.05	0.99	0.94	0.90	0.88
Kerala	0.04	1.29	1.31	1.30	1.27	0.04	1.25	1.22	1.18	1.14	0.05	1.22	1.19	1.16	1.15
Madhya Pradesh[b]	0.08	1.06	1.02	0.96	0.90	0.08	1.07	1.03	0.97	0.91	0.08	1.14	1.11	1.07	1.01
Maharashtra	0.12	0.74	0.68	0.66	0.67	0.12	0.78	0.68	0.61	0.58	0.12	0.75	0.71	0.69	0.70
Orissa	0.02	1.19	1.32	1.48	1.62	0.02	1.25	1.49	1.78	2.04	0.03	1.24	1.45	1.66	1.85
Punjab[b]	0.09	0.79	0.68	0.59	0.53	0.10	0.82	0.69	0.58	0.50	0.11	0.75	0.66	0.59	0.54
Rajasthan	0.04	1.00	0.98	0.95	0.92	0.05	0.97	0.92	0.85	0.77	0.04	1.07	1.01	0.93	0.83
Tamil Nadu	0.08	1.08	1.09	1.09	1.09	0.08	0.97	0.95	0.93	0.93	0.08	0.96	0.88	0.81	0.76
Uttar Pradesh[b]	0.12	1.06	1.17	1.24	1.28	0.12	1.15	1.28	1.38	1.43	0.12	1.12	1.26	1.38	1.47
West Bengal	0.07	1.09	1.12	1.15	1.18	0.07	1.12	1.21	1.30	1.41	0.06	1.07	1.12	1.18	1.24
C.V.[c]	**0.47**	**0.18**	**0.25**	**0.31**	**0.36**	**0.46**	**0.18**	**0.28**	**0.39**	**0.47**	**0.44**	**0.17**	**0.26**	**0.35**	**0.44**
SC/ST	**0.16**	**1.35**	**1.58**	**1.81**	**2.00**	**0.17**	**1.41**	**1.64**	**1.86**	**2.05**	**0.19**	**1.32**	**1.49**	**1.66**	**1.81**
Non SC/ST	**0.84**	**0.94**	**0.89**	**0.85**	**0.81**	**0.83**	**0.92**	**0.87**	**0.82**	**0.78**	**0.81**	**0.92**	**0.88**	**0.84**	**0.81**

a. Contribution to all India deprivation by the various states is deflated by their respective population share.

b. Assam includes Manipur, Meghalaya and Tripura; Punjab includes Haryana, Himachal Pradesh and Delhi; Uttar Pradesh, Madhya Pradesh and Bihar include Uttaranchal, Chhattisgarh and Jharkhand since their inception (here only for 61st round).

c. Coefficient of Variation

Table 17: Contribution of States[a] to All India Total Deprivation-NFHS Sample

States	NFHS1					NFHS2					NFHS3				
	Population Share	Deprivation Contb. (at α = 0)	Deprivation Contb. (at α = 1)	Deprivation Contb. (at α = 2)	Deprivation Contb. (at α = 3)	Population Share	Deprivation Contb. (at α = 0)	Deprivation Contb. (at α = 1)	Deprivation Contb. (at α = 2)	Deprivation Contb. (at α = 3)	Population Share	Deprivation Contb. (at α = 0)	Deprivation Contb. (at α = 1)	Deprivation Contb. (at α = 2)	Deprivation Contb. (at α = 3)
Rural Areas															
Andhra Pradesh	0.05	1.00	1.08	1.13	1.17	0.04	1.00	1.04	1.07	1.09	0.04	1.00	1.03	1.04	1.04
Assam[b]	0.08	1.00	0.97	0.94	0.91	0.10	1.00	0.97	0.93	0.90	0.13	1.00	0.93	0.87	0.82
Bihar[b]	0.07	1.00	1.10	1.17	1.23	0.11	1.00	1.11	1.22	1.32	0.04	1.00	1.11	1.20	1.27
Gujarat	0.04	1.00	0.91	0.86	0.83	0.04	1.00	0.94	0.90	0.87	0.04	1.00	0.90	0.84	0.79
Jammu & Kashmir	0.04	1.00	0.89	0.81	0.75	0.04	1.00	0.86	0.75	0.66	0.04	1.00	0.87	0.76	0.67
Karnataka	0.05	1.00	1.01	1.01	1.00	0.05	1.00	1.00	1.00	1.00	0.07	1.00	1.04	1.05	1.06
Kerala	0.05	1.00	0.79	0.64	0.54	0.03	1.00	0.78	0.63	0.51	0.04	1.00	0.78	0.61	0.48
Madhya Pradesh[b]	0.08	1.00	1.12	1.21	1.28	0.09	1.00	1.07	1.11	1.14	0.10	1.00	1.12	1.22	1.31
Maharashtra	0.04	1.00	0.98	0.96	0.95	0.04	1.00	1.00	0.99	0.99	0.05	0.99	1.01	1.02	1.04
Orissa	0.06	1.00	1.10	1.17	1.23	0.06	1.00	1.12	1.23	1.33	0.05	1.00	1.12	1.24	1.34
Punjab[b]	0.11	0.99	0.85	0.73	0.64	0.11	1.00	0.84	0.71	0.60	0.12	1.00	0.86	0.75	0.65
Rajasthan	0.08	1.00	1.07	1.13	1.18	0.09	1.00	1.03	1.04	1.06	0.05	1.00	1.08	1.14	1.21
Tamil Nadu	0.04	1.00	1.03	1.04	1.04	0.04	1.00	0.98	0.95	0.93	0.04	1.00	0.99	0.98	0.97
Uttar Pradesh[b]	0.15	1.00	1.02	1.03	1.03	0.14	1.00	1.05	1.08	1.09	0.14	1.00	1.08	1.14	1.18
West Bengal	0.06	1.00	1.09	1.17	1.23	0.04	1.00	1.06	1.11	1.15	0.05	1.00	1.05	1.10	1.13
C.V.[c]	**0.48**	**0.00**	**0.10**	**0.17**	**0.23**	**0.52**	**0.00**	**0.10**	**0.18**	**0.25**	**0.56**	**0.00**	**0.11**	**0.19**	**0.26**
SC/ST	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**0.32**	**1.00**	**1.10**	**1.18**	**1.25**	**0.33**	**1.00**	**1.09**	**1.16**	**1.22**
Non SC/ST	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**0.69**	**1.00**	**0.95**	**0.91**	**0.88**	**0.67**	**1.00**	**0.96**	**0.92**	**0.89**
Urban Areas															
Andhra Pradesh	0.04	1.03	1.10	1.19	1.28	0.03	1.00	1.09	1.20	1.33	0.09	1.00	0.99	0.98	0.97
Assam[b]	0.08	1.02	1.13	1.16	1.14	0.07	1.02	1.14	1.22	1.27	0.09	1.01	1.10	1.17	1.22
Bihar[b]	0.05	1.00	1.13	1.31	1.50	0.03	1.01	1.20	1.43	1.67	0.03	1.01	1.21	1.45	1.74
Gujarat	0.05	0.99	0.96	0.95	0.96	0.06	1.00	0.96	0.93	0.92	0.03	0.99	0.86	0.77	0.69
Jammu & Kashmir	0.04	0.98	0.79	0.64	0.53	0.03	0.99	0.89	0.78	0.66	0.02	0.99	0.92	0.85	0.79
Karnataka	0.06	1.00	1.06	1.13	1.20	0.05	0.99	1.00	1.02	1.05	0.05	1.00	1.09	1.16	1.24
Kerala	0.05	1.02	1.14	1.20	1.20	0.03	1.01	1.09	1.11	1.07	0.02	1.00	1.04	1.07	1.06
Madhya Pradesh[b]	0.06	1.03	1.09	1.13	1.15	0.07	1.00	1.13	1.29	1.46	0.09	1.00	0.98	0.99	1.01
Maharashtra	0.07	1.00	0.93	0.84	0.75	0.13	1.01	0.97	0.90	0.81	0.14	1.00	0.93	0.85	0.76
Orissa	0.05	1.01	1.26	1.51	1.71	0.03	1.01	1.29	1.69	2.19	0.03	1.00	1.19	1.44	1.77
Punjab[b]	0.24	0.98	0.80	0.65	0.54	0.19	0.99	0.82	0.66	0.53	0.13	1.00	0.93	0.85	0.76
Rajasthan	0.04	1.00	1.01	1.04	1.09	0.06	1.00	0.98	0.96	0.93	0.03	0.99	0.92	0.86	0.82
Tamil Nadu	0.05	1.03	1.21	1.35	1.44	0.07	1.00	1.07	1.13	1.17	0.06	0.99	1.01	1.03	1.04
Uttar Pradesh[b]	0.10	0.98	0.94	0.92	0.91	0.08	1.00	1.00	1.00	1.01	0.12	0.99	1.01	1.05	1.09
West Bengal	0.04	1.03	1.25	1.42	1.54	0.07	1.01	1.05	1.04	1.02	0.07	1.01	1.03	1.03	1.00
C.V.[c]	**0.74**	**0.02**	**0.14**	**0.24**	**0.31**	**0.64**	**0.01**	**0.12**	**0.24**	**0.36**	**0.61**	**0.01**	**0.10**	**0.20**	**0.31**
SC/ST	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**0.19**	**1.41**	**1.64**	**1.86**	**2.05**	**0.21**	**1.32**	**1.49**	**1.66**	**1.81**
Non SC/ST	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**0.82**	**0.92**	**0.87**	**0.82**	**0.78**	**0.79**	**0.92**	**0.88**	**0.84**	**0.81**

a. Contribution to all India deprivation by the various states is deflated by their respective population share.

b. Assam includes Manipur, Meghalaya and Tripura; Punjab includes Haryana, Himachal Pradesh and Delhi; Uttar Pradesh, Madhya Pradesh and Bihar include Uttaranchal, Chhattisgarh and Jharkhand since their inception (here only for NFHS 3).

c. Coefficient of Variation

Table 18: Random Effects Panel Estimates: NSS Sample

Independent Variables ↓	**Rural Sample**		**Urban Sample**	
Dependent Variables →	**log(π_1)**	**log(π_1)**	**log(π_1)**	**log(π_3)**
log (income)	-0.267***	-0.526***	-0.368***	-0.616***
	(-5.183)	(-4.686)	(-4.397)	(-3.377)
log(literacy rate)	-0.0263	0.0964	0.340	0.218
	(-0.446)	(0.819)	(1.171)	(0.387)
log (scst proportion)	0.0123	0.00486	-0.142***	-0.229***
	(0.481)	(0.0917)	(-5.883)	(-4.985)
time[a]	-0.0814***	-0.179***	0.0334	0.0418
	(-4.333)	(-4.561)	(1.264)	(0.778)
Constant	6.249***	6.955***	5.078***	6.643**
	(12.76)	(6.930)	(3.292)	(2.215)
Observations	45	45	45	45
Number of state	15	15	15	15
R-squared overall	0.719	0.648	0.480	0.370

Robust z-statistics in parentheses

*** p<0.01, ** p<0.05, * p<0.1

a. The 'time' dummy is taking value of 0 for 50th round, 1 for 55th round and 2 for 61st round.

Figures

Figure 1: D-Curves NSS Sample

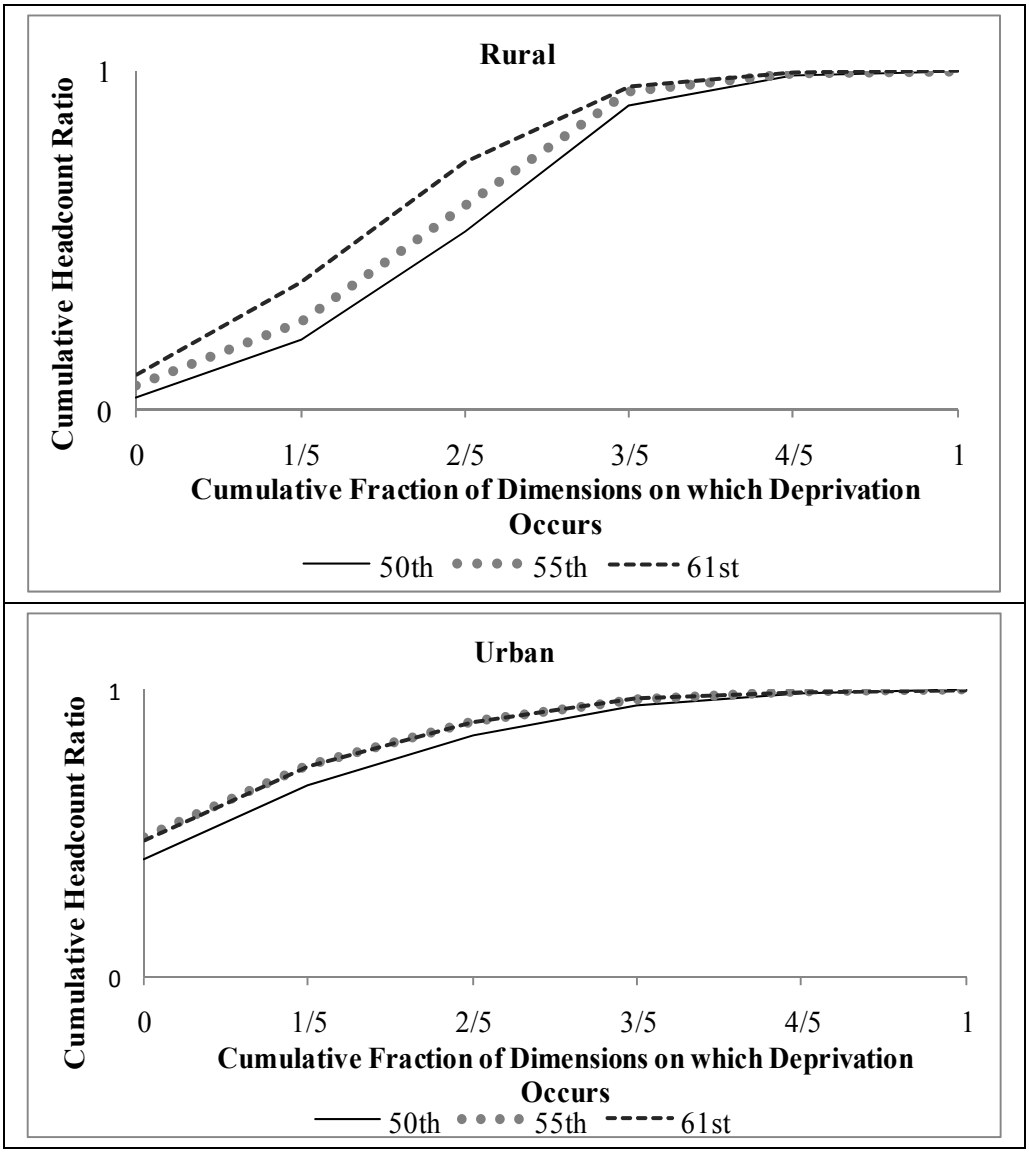

Figure 2: D-Curves for NFHS Sample

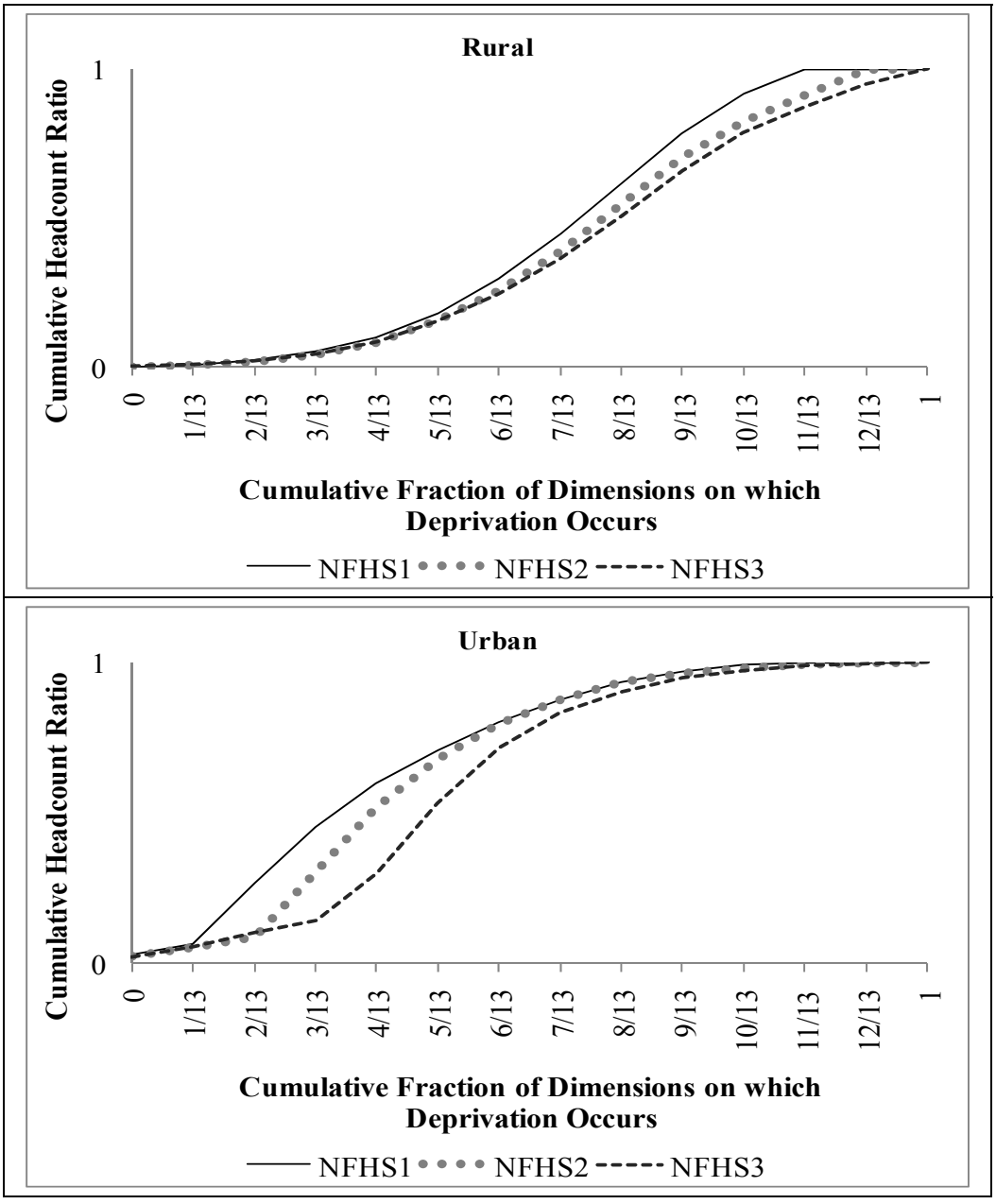

Figure 3: D-Curve for NSS3 (61st Round) and NFHS3

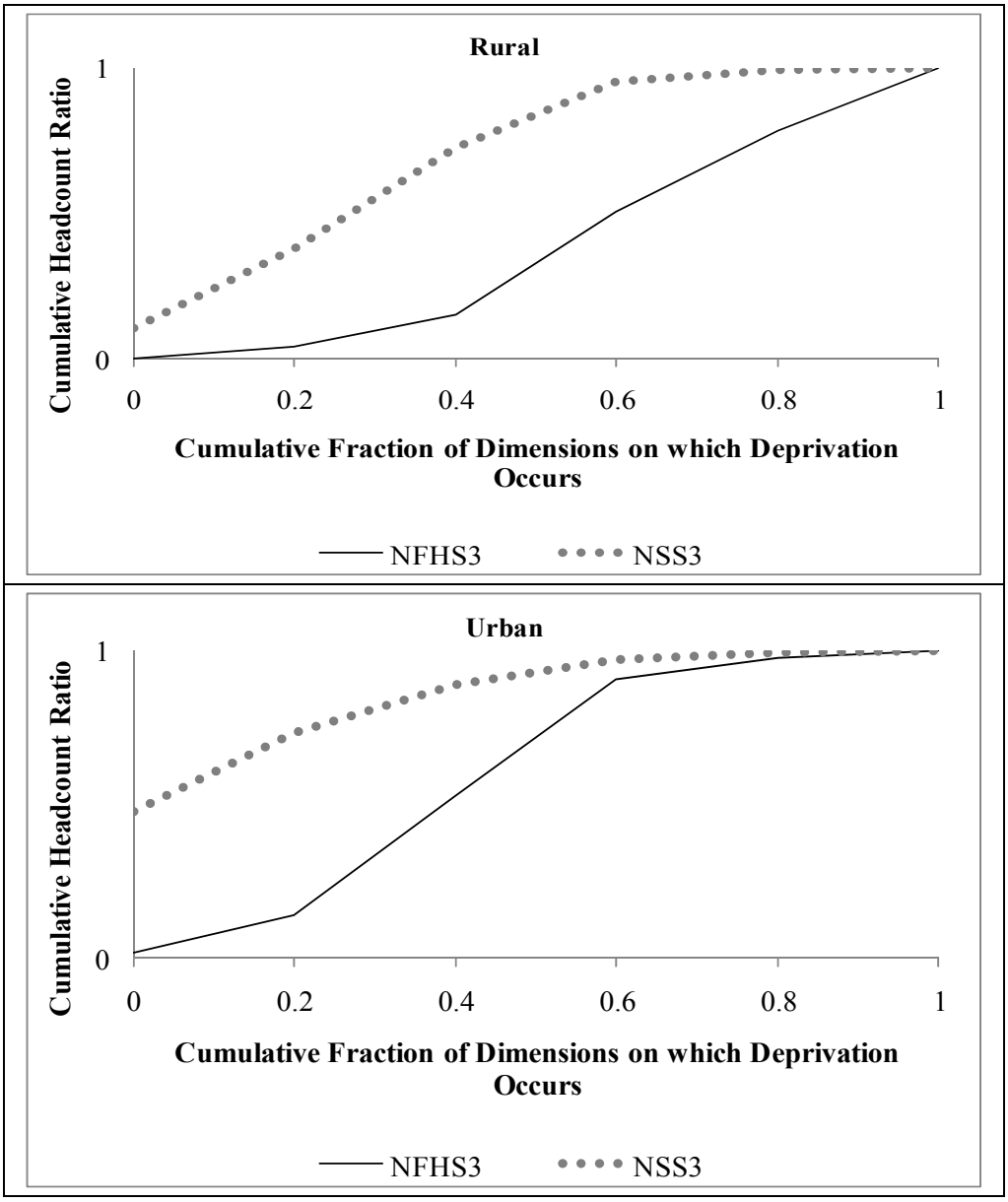

Figure 4: NSS 61 and NFHS 3 Graphs for Rural and Urban Combined